THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

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Agricultural Notes.

Husbandry of Vermont.

We had lately an opportunity of passing through several of the western counties of Vermont, and offer the following notes in regard to the different matters to which our attention was drawn.

SHEEP.—Beginning at the farther end of our tour, we first called on S. W. JEWETT, of Weybridge, whose flock of sheep is well known. Since we had before seen it, Mr. J. has imported some ewes from the flock of the late Lord Western, Essex, England. They had just been shorn. We did not see their fleeces. They are well shaped sheep, and of good size. Mr. J. is crossing them, and a part of the rest of his flock with a ram of the Taintor importation, and has some handsome lambs of this cross.

M., & A. L. BINGHAM, of Cornwall, have noted flocks. The former has 500 and the latter 1400 head, including lambs. Their aim, we understand, has been for several years, to produce sheep of strong constitution, with heavy fleeces, of about the quality of common Merino. Mr. M. Bingham showed us 400 fleeces very well washed and put up in good order, which he informed us averaged five pounds each. Messrs. B. have purchased sheep of Mr. Taintor, of Hartford, Ct., imported by him from France. Mr. M. B. sheared 12 ewes of this stock the present season. They were not washed. One of the fleeces weighed seventeen pounds, and the average was thirteen pounds ten ounces—twelve months' growth. Mr. A. L. Bingham has between forty and fifty, of different ages, of the Taintor stock, and a similar stock imported by F. Rotch, Esq., of Otsego county, N. Y. Of these, several had their fleeces on, and are to be shown at the next N. Y. State Fair. These sheep are much larger than any of the Spanish race that have heretofore been introduced here, and produce much heavier fleeces than any others with which we are acquainted. Their bodies, and even their heads and legs, are thickly covered with wool. Some of them have very great perfection of form, with very even fleeces, of good quality for Merino.

WM. R. SANFORD, of Orwell, has a flock of fine Merinos, which for several years has numbered from 300 to 500 head. Mr. S. has managed his flock with much care and judgment, and it has long held a high rank among the best of this section. This year's clip, 300 fleeces, well cleaned and nicely put up, averaged over four pounds each.

J. H. CHITTENDEN, of Orwell, has a flock of 383, a portion of which are Saxons, from the flock of Mr. Colt, of Pittsfield, Mass., and the younger part of the flock are a cross of these on Merinos. The fleeces averaged 3 lbs., 5¼ ounces, clean, and in good order. JOHN W. BACON, of Orwell, has 215 sheep, mostly of Saxon blood; the fleeces of which averaged 3¼ lbs. the present season.

JESSE HINES, of Brandon, usually keeps about 450 pure Merinos—has this season 364. Mr. H. has exhibited sheep at the shows of the N. Y. State Ag. Society, which have been highly commended. After examining his whole flock, we are enabled to say that in our opinion, he is a judicious and careful breeder. His flock shows great uniformity in shape and weight of carcass, and presents an admirable appearance of healthiness and thrift. From what we saw of the fleeces, there is a general uniformity in the style of the wool, and the prices at which it has sold denote its quality. For several years past, excepting last year, it has brought an average of about forty cents per lb., and the fleeces have averaged 4¼ lbs. each.

J. S. PETTIBONE, of Manchester, has 400 sheep. They are descended from ewes of the Humphrey stock, crossed with rams from the Jarvis flock, and others from the flock kept by the Shakers at Enfield, N. H. He has paid much attention to the management of his flock for many years, and his care and attention has been well repaid. In respect to wool, this flock presents rather a peculiar character. It has generally an unusual length of staple for Merino wool, and is very soft, elastic, white and free from gum. The weight of the fleeces, washed, comparing one year with another, has been 4¼ lbs. He has now, two years' clip on hand. For several previous clips, he has obtained forty cents per pound. We would not presume to dictate so experienced and successful a wool-grower as Mr. PETTIBONE,—but we were so struck with the style of much of his wool, that we should like to see the experiment made, with a selection from the flock, for the production of the *finest* kind of wool for muslin de laines and merino cloths. It appears to us that wool might in this way be obtained, which would be very superior for these purposes.

SHELTER AND FOOD FOR SHEEP.—The importance of shelter for sheep, is acknowledged by all the best wool-growers with whom we conversed, and most of those we visited, have made good arrangements in this respect. Mr. A. L. Bingham has extensive accommodations of this kind, lately completed. His sheds, placed around his barns and yards, with their various divisions and apartments, for sheep of various ages and conditions, seem almost like a labyrinth; but when their situation and their relative connection is understood, they are seen to be very convenient. Though all the apartments can be well aired and ventilated, the temperature can be so regulated in some of them that they may be warm enough to have the lambs come at any time in the winter, without any danger of their suffering from cold. Most of the farmers we have named, have such shelters that the sheep can obtain protection from storms at all times, and many deem it important that they are not *wet* during the winter.

Much attention is paid to feeding the sheep. Hay, straw, and pea-haulm constitute the bulk of winter food. They are fed, mostly, in oblong boxes, with round

smooth rungs at such distances apart that the sheep can readily pass their heads between them. They eat with their heads in the boxes, and do not pull the hay over each other, or waste it, as they will do when fed from racks made in the old mode. Whatever is left in the boxes is taken away and fed to young horse-stock or cattle, which eat it well. Carrots and other roots are given to the sheep through the winter, and the allowance to the ewes is increased when they suckle. All speak highly of the carrot. The beet is less nutritive than the carrot, but from its cathartic quality, is useful as a *medicine* when sheep are kept chiefly on dry fodder. The carrot yields from 600 to 800 bushels per acre. All the sheep have constant access to salt, and to the best of water, which in most instances, is brought by aqueducts into their respective yards, where it runs at all times, unchecked by drouth or frost.

Another great advantage from thus keeping sheep confined in winter, is the saving of manure. Muck and litter, spread over the ground at first, absorb all the liquids, and the manure is of the strongest and best kind for any purpose.

The sheep are generally pastured on hilly or mountainous lands, which are seldom or never plowed, and in many instances would be of little value for any other purpose. These pastures afford sweet and nutritious feed, and the animals thrive well and are healthy here. Sheep are kept on them for a greater part of the year than would be expected by a person not acquainted with them. The rule is, to keep the sheep out till snow comes, if it is not till December; and in many instances they are turned out again as soon as the ground is bare. Mr. Hines informed us that he turned out a portion of his flock, the present season, the 13th of April, and that 200 sheep did not eat 200 pounds of hay afterwards. He has often turned out as early and sometimes earlier than the date mentioned. Mr. Pettibone states that he has sometimes turned out in March —often the early part of April. In only moderate storms, the sheep have shelter in woods; if severe storms occur, they are taken up.

It may seem singular that sheep can obtain support so much of the year on these mountain pastures. During the warm season, they feed almost entirely on the highest parts; and the lower slopes and valleys are left comparatively untouched for several weeks. The grass—(blue-grass, &c.) is of such a nature that it is not greatly injured by frost; and as the weather becomes cold, the sheep descend to the warmer and lower parts, where the feed is abundant. What is not eaten in the fall, remains till spring; and being covered with snow and excluded from the air during winter, it appears quite fresh, and affords good support to the sheep as soon as they are turned out. The warm valleys and sunny sides of the hills, protected from cold blasts, feel the first influences of returning spring, and a thick and sweet herbage is soon produced, on which, in connexion with the growth of the former season, the sheep subsist, till the increasing warmth of the season clothes the mountain ranges with verdure, and the sheep again ascend to their favorite haunts.

FACILITIES FOR KEEPING SHEEP.—Much of the region through which we passed, affords peculiar advantages for keeping sheep and other live-stock. Many farms comprise three descriptions of land, each adapted to a different purpose. A portion lies on streams which overflow their banks in spring, and produces every year, with no attention whatever, (except in some instances to keep out the wild grasses and shrubs,) from a ton and a-half to two tons of hay to the acre. A second portion is situated between the meadows and hills, and forms the most easy and profitable soil for cultivation, and the production of grains, vegetables and fruits. A third portion lies on the hills and mountains, and affords permanent pasturage. The pastures generally receive no manure except what is left by the stock while grazing them; though the application of plaster is sometimes resorted to with excellent advantage. Thus the second portion of the farm, or that which is cultivated, is all that does not support itself, and this receives the the benefit of the other portions. To this, the stock is brought in winter to consume the hay grown on the intervales, and the manure is copiously applied to the cultivated crops, making the land rich, and insuring large returns. But the alluvial meadows, besides affording, in many cases, the hay for all the stock of the farm, are often grazed in spring, before the grass has started sufficiently in the pastures to support stock, and are always closely fed from the time the hay is off till snow falls. Notwithstanding this, the produce is undiminished.

In respect to the effect of feeding these meadows, we questioned many of the farmers whom we met. The general testimony was, that it did no injury, and some affirmed that in many cases it was a benefit. Mr. THRALL, an intelligent and observing farmer in Rutland, informed us that his meadows were decidedly improved by feeding; because, if they were not fed, and the "old fog" was left on the ground, the grass became *sour* and wild herbage came in. This was also the testimony of Mr. KELLEY, a large farmer in the same neighborhood.

The alluvial lands to which we allude, are mostly situated on the waters of the Lemon-Fair, the Otter-Creek, and the Batten-Kill. Some of the higher and warmer portions are sometimes cultivated, and produce the most luxuriant crops. Mr. Thrall showed us a beautiful field of corn, on a branch of the Otter-Creek, and informed us that he had, in a former season, raised from this land one hundred and two bushels of corn to the acre, ascertained by actual measurement.

Many of the mountain pastures are valued at only $3 to $8 an acre. It costs but little to fence them, either for sheep or cattle. A lot of suitable soil and aspect is first selected; it is cleared of wood and sown to grass. It is surrounded by a *bush* fence, made by falling trees and shrubs into a line, and in such a manner as to turn the stock. The fence being in the woods, it is not necessary that it should be very high or very strong, and with a little attention every spring, to fill up the lowest places, it lasts many years.

DAIRYING.—On some farms, cows have lately taken the place of sheep; and we are inclined to think that, on the most level and fertile lands, a considerable change is destined to take place in this respect. Wool-growing will probably be more confined to the cheaper and rougher soils, and the making of butter and cheese, and the fattening of stock will be more extensively pursued on the more valuable portions. In Orwell, Mr. SANFORD conducted us to several cheese-dairies that appear to be well managed. J. C. THOMAS keeps forty-eight cows. He did not commence making cheese last year till after the first of June. He sold his cheese *green* at six cents per pound. The cows yielded an average of $30 each, besides the milk, butter and cheese used in the family, not reckoned.

ISRAEL SMITH keeps fifty cows,—has generally sold his cheese at about six and a half cents per pound; and the average return for each cow, in cheese and butter, has been $25 the season. It is proper to mention, that this section of the country has been visited by severe drouths for the last three seasons; and myriads of grasshoppers have each season eaten up the herbage of the pastures. These causes have, it is thought, lessened the products of the dairies to the amount of twenty to twenty-five per cent. Mr. Smith has a neat and productive farm, consisting of 430 acres. He has lately erected a commodious and convenient barn, for the accommodation

of his cows. They stand on each side of the floor-way, which runs lengthwise of the barn, and are fed directly from the floor, without mangers,—a plank eight or ten inches high preventing the fodder from getting under foot. There is a cellar under the barn for storing vegetables, for winter feeding. Mr. S. prefers the carrot to any other root, and raises from an acre to two acres annually. They are fed in quantities of a peck to half a bushel to a cow through the winter,—the larger quantity being given from the time the cows calve till they go to pasture. Both Mr. Smith and Mr. Thomas have formerly kept sheep. They concur in stating that cows are most profitable on their farms. The whey in both dairies is fed to swine; and we did not understand that any credit was made for it, in the estimate of returns for the cows.

On the farm of the late JOHN THOMAS, sixty cows are kept,—twenty at the homestead, and forty under the care of a tenant. The home dairy (we did not see the other,) is conducted with great neatness, and the cheese has a high reputation for excellence,—commanding seven cents per pound. We obtained no statistics as to the quantity produced.

D. C. RUST has thirty cows, and his fixtures for making cheese are well arranged. His absence from home prevented our obtaining particulars in regard to the dairy.

IMPROVEMENT IN CATTLE.—Considerable interest is awakened in several neighborhoods, in regard to the improvement of cattle. A. CHAPMAN, of Middlebury, kept for several years a first rate Ayrshire bull, from the herd of Mr. Cushing, of Watertown, Mass. We have before spoken of this stock; but it has since been more fully proved for the dairy. Mr. C. has several half blood, and some three-quarter blood Ayrshire oows. Some of them are, in points, about all that could be looked for in a dairy-cow; and we have reason to believe that their "looks do not belie them." Mr. C. informs us, that in fourteen days of June, 1848, four of these cows made 80¾ pounds of butter, besides supplying a family of fourteen persons with milk and cream. One of the four made 11¾ pounds of butter in seven days. The last of September, 1848, three of the above four cows made 30 pounds of butter in seven days,—or ten pounds per week each. They are a small-boned, thrifty stock. Mr. C. states that he killed a pair of half blood steers, three years and six months old, fed for two months mostly on sugar beets,—no meal or grain of any kind,—and they weighed a trifle over a thousand pounds each.

Messrs. BINGHAM, of Cornwall, have introduced the full blood Herefords, from the late herd of Corning & Sotham, of this city. They look, generally, remarkably well, and prove to be a very valuable stock for this section. Their hardiness adapts them to the climate; they are easily kept, and thrive rapidly on hay or grass. The general characteristics of the Herefords have been stated in our columns. A. L. Bingham has several Durham heifers, purchased of Mr. Rotch, of Otsego county, N. Y., which he is crossing with Hereford bulls.

PARIS FLETCHER, of Bridport, has several full blood Durham cows, and several good half bloods. Two of the full bloods have lately been sold to Mr. Henshaw, of Boston. Mr. CHIPMAN, of Shoreham, has some fine cows,—crosses of the Durham breed. A four-year-old cow of his gave, as was stated, 24 quarts of milk per day in June.

Mr. SANFORD, of Orwell, has some full blood Devons, and some highly crossed with the Devon. He has a beautiful young bull, purchased of Mr. Atwood, of Connecticut. He was by Mr. Hurbut's bull, Bloomfield; his dam from the herd of Mr. Washbon, of Otsego county, N. Y. The Devons have thus far done well in Mr. S.'s hands, and he is determined to increase them. We see nothing to hinder their being a useful and profitable stock here.

Mr. VANDERLIP, keeper of the hotel at Manchester, has some Durham cows, from the herd formerly owned by Hon. L. C. Ball, of Hoosick, N. Y.; two of which are great milkers. He has also some handsome cows and heifers from Connecticut, showing much Devon blood, which appear well as dairy cows. There are several bulls and considerable young stock in the neighborhood, mixed more or less with the Ayrshire and Devon blood; and the farmers generally consider an infusion of the blood of these breeds an improvement.

HORSES.—The introduction of "Black Hawk," has made an unquestionable and important improvement in the horse-stock of this section. The oldest of his progeny here are four years old, and have been more or less proved. They have generally size enough, and a large proportion of them are superior in form, style, and action. The maximum of their speed has not, of course, been ascertained at this green age; but that they will not be wanting in this respect, might be shown by examples "too numerous to mention" here. As a specimen, we will refer to the performance of a mare, four years old, owned by J. W. HOLCOMB, of Ticonderoga, which, as we were credibly informed, trotted in a sleigh, last winter, *twenty-six miles in two hours and ten minutes*. Those who wish farther particulars in regard to the stock, will obtain them by making inquiries in the proper quarter.

Mr. J. HILL, of Sunderland, has introduced a horse which is a cross of the English draft-horse. We had not an opportunity of seeing him; but he was described to us as being six years old,—seventeen hands high,—weight 1380 pounds. He is said to be well made, and a good traveller. It is thought he will be useful in improving the stock of the neighborhood.

APPEARANCE OF CROPS.—We found that portion of Vermont lying between the Green Mountains and Lake Champlain, suffering for want of rain. *Grass*, so important to this section, must be light, particularly on old grounds. In other sections through which we passed, the crop looked well. *Wheat* is not very extensively cultivated. It generally does well,—nearly as well as it ever did here, except when attacked by the midge,—commonly called the "weevil." The means of escaping this insect, are to have the grain either very *early* or very *late*. Early winter wheat may become too far matured to be much injured by the insect, by the time it appears; and the sowing of spring wheat is deferred till the last of May, so that it will come into bloom after the insect has passed. We saw in Shoreham, several fields of very promising winter wheat, and were informed that this kind generally gives good yields. The late sowing of spring wheat, to which the farmers are obliged to resort, renders it liable to rust; but if it escapes this, it yields from twenty to thirty bushels, and sometimes over forty bushels per acre. *Oats* are extensively cultivated, and yield well. They may be said to be the only grain of which a general surplus is produced. *Indian corn* is raised in sufficient quantity for home consumption. The warm valleys of the Otter-Creek and Batten-Kill produce good crops,—some farmers raising from 500 to a thousand bushels each. *Peas* are a valuable crop on many farms. Mr. Sanford, of Orwell, who cultivates them quite extensively, puts them on sward-ground, plowed either in autumn or spring, sows three bushels of seed to the acre, and obtains from twenty-five to thirty bushels per acre. The crop is cultivated with but little expense; it leaves the ground light and clean, and it comes in early for fattening hogs in the fall, for which purpose, in connexion with the waste of the dairy, it is much used. Peas are considered worth

as much, or more per bushel, as Indian corn. Mixed with oats and ground, they form the best of feed for horses, and also for sheep. The variety commonly cultivated is the Canada field pea. *Potatoes* have generally suffered from the *rot* for several years, and the cultivation of the crop has greatly decreased on this account. The variety called *western reds* has generally escaped the rot better than others. *Broom-corn* is raised to some extent in some neighborhoods, and is made into brooms by those who raise it. Messrs. Rust, Higgins and Noble, of Orwell, are engaged in the business. The latter has eight acres the present season. Of *fruits*, apples, pears and plums do well on the warmer soils, and particularly well on the slate loams. We were sorry to see a general neglect, in most neighborhoods, in regard to the culture of fruit trees. On many farms, the only orchards were those planted by the first settlers, which, though formerly flourishing, were in most instances in an unproductive condition. Now that rail-roads are soon to afford ready means of transportation to the best markets, we hope more attention will be given in this section to fruits, which we are confident would give profitable returns.

General Improvement.—We were happy to notice visible signs of improvement in various branches of agriculture, in most neighborhoods through which we passed; and we saw many places, besides those we visited, which we should have been pleased to examine, had opportunity permitted, Among these, we may name the neat looking farms of Mr. Marsh, of Clarendon, Mr. Hull, of Wallingford, Mr. Hill and Mr. Lathrop, of Sunderland, Mr. Canfield, of Arlington, and others, whose owners' names we did not learn.

Suggestions for Farmers.

System, Order, and Economy, in Feeding Stock.

To all farmers, whether occupying fifty acres or three hundred and fifty acres, there is no portion of their duty that I would more urgertly press on them, than System, Order and Economy in *feeding* their cattle and stock generally. Nature has implanted in all living creatures, two laws, which never fail, while in health, to induce the use of nourishment: and these imperative laws are hunger and thirst. Regular and systematic obedience to these laws, conduces to health,—any deviation from system and regularity, leads to *disease and death*.

I deem it wise to seek and examine the opinions of men who devote large portions of their lives to the study of the animal structure, and the functions of the complicated machinery of life; and while we appreciate the services rendered to us, we may with advantage, temper their zeal, by using and applying, every day, facts, indicating the true course of action to be pursued in our agricultural vocation.

Thus, though the process of digestion of food in the stomach, seems in the minds of some men to be well understood, I confess that to me, the subject seems to need far more investigation. Great advances have been made, deep research and strong reasoning, yet the conclusions may not be definite. Nevertheless, science has so far opened her treasures to us, that with careful observation, added to study, we *can* regulate the nature of our animals, so as to add to or diminish their fat at our pleasure.

To effect this desirable object, we must remember that it is the sensation of hunger and thirst, and their proper gratification, we are to watch and appease. Observation and reasoning must guide us in the selection of the proper material, and its due preparation. It is not my intention to go into the subject of feeding or fattening our animals, but to lead the farmer to the consideration of the importance of rigid *system* in this and every other branch of farming. It is necessary, however, to touch upon feeding, incidentally, to prove my positions.

We give to animals a *variety* of substances, from all of which certain principles are derived, of greater or less value in the production of fat and muscle; but it is a fact which ought to be better known, that from each and all of these varieties of food, a few elementary or constituent parts, alone contain the *nutritive matter*. Hence the necessity for ascertaining *which* of the varieties afford the greatest quantity of nutriment,—a most important source of true economy. These elements derived from vegetable substances, are mainly gluten, starch, gum and sugar; and of these, we find the largest portion of all our grains to be starch and gluten.

This gluten is the great nourishing portion of our fodder; upon this our stock will always thrive and do well, while on the contrary, if gluten is *absent*, and the other elements *abundant*, they will fall off and ultimately perish.

Perhaps, some may ask, what is this gluten? why not use some word that all may understand? In reply I would say, that the brevity of the word is most convenient; though undoubtedly this, like many other terms in daily use, require oft repeated explanation, until familiarity shall rank them among words of every day common use. Gluten is the tough, elastic substance which remains after washing flour in a cloth until the starch and all other matters are carried off; gluten remains as a tenaceous adhesive mass, insoluble in water, but soluble in alcohol, and readily soluble in the stomach of animals. This is the portion of our wheat and other grains which affords the most valuable nutriment to our cattle and other animals. The establishment of this fact, teaches us the necessity of examining our varieties of food, that we may use those possessing the largest share of this nutritive element, and establish a system of feeding without waste, and accumulate fat in the least time. These examinations have been made for the benefit of the English cattle-breeders, and I select a few varieties as given in the following table, to show how much vegetable substances vary in nutritive power.

One thousand parts of the following vegetables in their green state, afforded nutritive matter as follows:—

	Whole quantity of nutritive matter.	Starch.	Gluten.	Sugar, &c
Wheat,.....	955	730	225	
Barley,.....	920	790	60	70
Oats,.....	743	641	87	15
Rye,.....	792	645	38	109
Peas,.....	570	501	30	43
Oil Meal,.....	151	123	17	11
Clover,.....	39	30	5	4
Timothy,.....	33	24	.....	9

Davy's Ag. Chemistry.

It is to be hoped that before long we may add Indian Corn to the foregoing list; but as yet no sufficiently accurate *examination has been completed*.

Here "we have facts abundant to show" the necessity of *a system*, to avoid waste. But every farmer knows or ought to know that, if a cow is deprived of her food in sufficient quantity, for even one day, the quantity of milk will be somewhat reduced, and it will require *two* or more days of *regular* feeding to bring the quantity of milk back to its average quantity. This is another proof of the need for system and order with our stock.

We are all familiar with the art of mastication, and the method by which our cattle perform this essential preparation of their food for digestion. From observation, we know the necessity of this grinding process,

and when from any cause it is suspended, our cattle become diseased. Hence we can readily see that when we shut our cattle in pens, stalls or yards, we deprive them of their natural exercise, and interfere with their natural habits. To enable our stock to thrive and fatten under such restraints, we are compelled to aid them in various ways; the most usual being the application of food in a partially prepared state, by grinding, or breaking it into parts, that it may be more easily digested. Various trials have proved the efficacy of this system; for instance, two milch cows were stalled and fed as follows, for five days, on *whole* barley, with grass, and yielded one hundred and eleven pounds of milk. The same food was continued with regularity for five days longer, and the milk decreased ninety-seven pounds. The same cow at another period was fed on *ground* barley, with grass and some hay, and produced during the first five days, one hundred five and a half pounds of milk; in the next five days she gave one hundred and five pounds, and being continued on the same *ground* feed for five days longer, the milk increased to one hundred and ten pounds. The results from the second cow were similar.

It cannot be necessary to multiply like cases, for the truth is very generally understood, that all food when bruised or ground into meal, is better for our stock than in a whole or unbroken state.

This leads us to inquire how we can grind or break the food with most economy. The expense of sending to a distant mill is a serious impediment, detaining a man and team the greater part of a day. The small steel hand-mills wear too rapidly. These difficulties have caused the production of various contrivances for grinding grain by such horse power as most of our farmers can command.

Both Hussey and Sinclair, of Baltimore, have machines for grinding corn and cob together for feed; but we are not yet decided as to the economy of using the cob; for my own part, having tried it for two successive years, I am rather disposed to abandon it; yet we should wait the coming of the several analyses of the corn plant now in progress, before we relinquish it.

In Massachusetts, a small run of stones has been so arranged as to grind grain or bruise it for food, and it has many advocates. The most perfect machine however, as yet produced, is the mill patented by Fitzgerald, and now manufactured in New-York by Charles Ross & Co. Many are using this small mill on their farms with advantage, in various ways; for its ingenious and simple construction, enables the farmer to break or grind any of his grains for feed; or at pleasure, he can reduce them to the finest meal for his family use. Another advantage is that, he may grind every *grass seed* or seed of every *weed* which finds its way into his barn with the grain, which being separated by the fanning mill, and ground in this small mill, affords a highly nutritious food for stock, while it destroys, and thus prevents the propagation of foul weeds. Here then is the means by which a systematic feeding of our stock may in its season be rigidly carried on. The power of two horses is necessary for these small mills, and every farmer can best make his own calculations as to the economy of the system, which must be governed by the size of his farm and the number of his stock. AGRICOLA. *Seneca County.*

Shall we kill Moles?

We have had several inquiries relative to the best modes of destroying these animals, and have in former numbers given descriptions of traps most approved of for that purpose. The question, however, has been raised, whether it is for the interest of the farmer to destroy moles? Their chief food is insects, and it is to obtain these, that they burrow in the ground, and throw up little hillocks of earth, in which latter act lies the offence for which their lives are taken. Our acquaintance with the habits of this animal is not sufficiently intimate to enable us to say whether the good which he does to man preponderates over the evil; but we would recommend the following extract from a late number of the *North British Agriculturist*, as calculated to lead to proper observations.

JAMES HOGG, better known by the cognomen of the "Ettrick Shepherd," in an interesting paper published in the *Quarterly Journal of Agriculture*, appears to be amongst the earliest advocates for the preservation of moles, a view also entered into by the Editor of that Journal, who questions whether the mole may not be a very important friend to the farmer. "This is by the destruction of grubs, wireworms, and the like. It is known that the mole is a very voracious creature. He subsists on worms and the larvæ of insects, which he finds under ground, where no other enemy can reach them; and, at night he sallies forth and pursues his prey on the surface. It is probable that he then destroys a vast number of grubs and other creatures, whose ravages would all be felt in their season. Can it then be that in destroying the mole we are guilty of the heedless destruction of a friend? The matter is worthy of more consideration than it has, perhaps, yet obtained. We think that a strong case has been made out in favor of the 'blessed little pioneer,' by our ingenious and kind hearted correspondent; and that in all the pastoral districts of the country, a verdict of 'not guilty' may be brought in in favor of the long-enduring mole. Let us hope, then, that henceforward he may be suffered to live in peace, and die of old age, in all the sunny glens and green sward knolls of Yarrow. But what will the insulted gardener say to this our care of his ancient enemy? 'He is a thief, he steals my acorns by the bushel, destroys my onion beds, and roots up my tulips.' Alas for the little culprit! Within the limits of the ravaged garden, we fear we must give him up to the vengeance of the trap. But on the wide spread surface of the fields, where there are no onion beds to ravage, and no tulips to be laid waste, and where little space is yet left for the denizens of nature to breathe and sport in, is it quite certain that all the mischief which the little mole works to our turneps and our mangel wurtzel is not paid to us with usury, by the prodigious multitude of larvæ and destructive insects which he consumes?" Several writers, within these few years, in the *Gardeners' Chronicle* and *Gardeners' Journal*, have taken up views favorable to the preservation of the mole, and even have gone so far as to purchase them at so much per head, and turned them out on their own lands.

It is no doubt, testing the temper of the enthusiastic florist in no small degree to find that this industrious engineer has, during the night, driven a tunnel through the centre of his tulip bed, and, peradventure, has upheaved a favorite prime Bagnet or Byblomen; still, it is very questionable whether, had not the mole taken that direction, no doubt in quest of food, that the wireworm or grub might not have done him triple the injury. In fields, we are persuaded of their advantage, and even in gardens we have ceased to disturb them; for were there not insects for them to feed upon, they would leave us and go elsewhere, and wherever moles abound there also abound the wireworm, a much more destructive enemy.

The farmers in Belgium are averse to their being destroyed, and probably the most unpopular act in our own life was the introduction of English mole traps into that country; and although upon a royal domain and at the command of majesty itself, all our endeavors to extirpate them proved unavailing, and the habits of a gardening and agricultural people were yielded to as an act of expediency.

In the gardens at Dalkeith there are two borders of equal size, in one of which a trap-bitten mole, (for when once nearly caught they are exceedingly wary afterwards,) had taken up its abode for nearly a year, and out of which it could only escape by coming up through the surface, as the foundation of the wall along one side with a large main drain under it, is six feet deep, the solid gravel natural to the soil being ten feet deep under the walk, formed the other side and ends of the border. The means of escape are at one end of the border, and, from the appearance of the hole, it is pretty frequently used; and by this we conclude that the mole passes out at night in quest of food on the surface around, and by it retreats again in the morning. Formerly both borders were so over-run with wireworms, that the crops were destroyed. In both we have this season set traps of sliced potatoes fixed to the end of wooden skewers, and have set an equal number, and at a depth of from three to four inches in each. These are examined by a person we have the highest confidence in every three or four days, and the result is—in the border inhabited by the mole, only two wireworms have been detected, while in the other, the total number taken at three examinations was 6360, the number of traps being 106; average number at each trap being 20, and at one taking 2120.

Comparative Profits of Free and Slave Labor.

In reply to the inquiry of "A SOUTHERNER," we published last month the remarks of "A NORTHERNER." Having thus opened our columns to the subject, we are desirous of treating it with fairness, and therefore insert below, two other communications; with which,—as the most important points seem now to have been brought out,—we close the discussion.—EDS.

EDS. CULTIVATOR—In the May number of *The Cultivator*, "A Southerner" asks for information on the subject of labor. Whether it would not be more profitable to employ free labor than slave? Another Southerner undertakes to answer the question promptly and unhesitatingly in the negative. There is no labor in this country so cheap as slave labor. There is no labor in this country so well adapted to agriculture, particularly on large farms, as slave labor.

"Southerner," on his farm of 1200 acres, could not afford to employ free labor at all; without he changed his cultivation of grain and converted his land into pasturage. He has 800 acres arable land. If he cultivates the four shift system, he has 200 acres in corn, 200 in small grain, and 400 acres in grass. To cultivate this quantity of grain, it will require from 15 to 20 field hands. He has the labor on his farm, and owned by him, and it is kept up perpetually by the natural increase of his slaves, so that it costs him nothing after the first purchase, but to feed and clothe them. There is no labor he could obtain so cheap to him.

Let us suppose "Southerner" instead of owning the slaves, (which is a decided advantage) had to hire them. Say 20 field hands, men, boys and women, were to be hired. They could be had in Virginia at an average of fifty or sixty dollars per year, depending of course upon the proportion of men to women. The men being worth more. Twenty hands at fifty dollars would cost, ... $1000
Clothing and taxes, ... 200
Food, ... 400

$1600

There are no physicians bills to be paid by the hirer, as they are paid by the owner.

Let us see now how it will be in estimating the cost of free labor. According to the Patent Office Report, which is held as good authority in such matters, field laborers are worth in Massachusetts, and several other northern states, from $10 to $12 per month. We will suppose 16 men to perform as much labor as 20 mixed hands. It will stand thus:

16 hands at say $11 per month, being $132 per year, ... $2112 00
Cost of board, say $50, ... 800 00

Being cost of free labor, ... $2912 00
do of slave labor, ... 1600 00

Difference of cost, ... $1312 00

Thus it will be seen, that free labor will cost four-fifths more than slave labor, where each kind has to be hired. But where the farmer owns the slaves on his farm the difference is much more more decidedly in favor of slave labor.

"Southerner" says he has "a great deal of trouble, vexation and solicitude, on account of my (his) dependants." I can assure him that he will not find any situation in life free from its troubles and vexations. And I am decidedly of the opinion that there is as little trouble and vexation in the management of slaves as any other kind of laborers whatever. Suppose he were to substitute free labor for the labor of his slaves. Where would he obtain it? Necessarily from Ireland, as being the next cheapest to slave labor. Now I would ask him if he would not greatly prefer the management of twenty negroes on his farm, to the vexation and trouble of twenty Irishmen? I am sure he could not hesitate in his decision.

"Southerner" says, "we frequently see it stated in northern papers, that free labor is more profitable than slave, and that if southern people were to liberate their slaves, they would be more prosperous and happy." This is a very great error on the part of the northern people. The south is the most prosperous country in the world, and I presume equally as happy as any other people.

Its prosperity is mainly produced by the existence of slave labor. Without that species of labor, its fields would not be tilled, but suffered to be overrun by rank and poisonous weeds. The vast amount of agricultural products now annually exported from the south, would not be produced. Our northern brethren would be deprived of the great profits derived from their shipping and manufacturing interests. And the slaves themselves would be a wretched set of beings. As they are situated at present, they are the best fed, best clothed, most happy and contented body of laborers of any in the world. To our northern brethren we would say: if you prefer free labor we are perfectly satisfied with your choice. But as we prefer slave labor, all we ask of you, is to mete out the same measure to us, and let us alone. A VIRGINIAN. *Mathews Co., Va.*

EDS. CULTIVATOR—Having read in the May number of your paper, what appears to me to be a very honest, interesting, and intelligent inquiry in regard to free labor, from the pen of "A Southerner," and considering that it merits a careful and faithful answer, I thought I would furnish you a few remarks in regard to it.

The object the gentleman has in view, is certainly a most laudable one; for it is impossible to conceive of a more noble desire, than that for the mutual improvement of the condition of himself and those around him. That he may receive such information as will assist him in the execution of his wishes, is my most fervent hope; and if these lines contain ought that is of value to him, I shall have attained my object.

I am sanguine in the belief, that by a judicious introduction of free labor, he will greatly diminish his "vexation and solicitude," as well as increase his annual income. A laborer, who feels that he is receiv-

ing a full compensation for his exertion, has a stronger and more powerful stimulant to activity than it is *possible* to present to the slave. Hence, the latter is characterized by his lethargic movements, and indolent babits,—evincing a total disregard for the interests of his master, and I imagine is, in some cases, a source of expense, rather than profit. And there can be no doubt that the intelligent and educated laborer is far superior to the ignorant, and much cheaper, even at a greater salary.

The experience of all those who have employed laborers of both grades, I am confident, will speak in affirmation of this opinion. But the most judicious manner in which the gentleman in question can substitute free, intelligent workmen, for his slaves, is a matter that cannot be decided without the most serious and thorough reflection. Whether he had better attempt to transform them into free laborers, or dispose of them either by selling them to southern planters, or giving them their freedom, and introduce free white labor from the north, is perhaps difficult to determine. I am satisfied that the adoption of either of these measures would be conducive to *his* interests. I would advise him to make some experiments, and give the results to his southern brethren, many of whom are similarly situated, and would be grateful at their reception.

I am of the opinion, however, that he will meet with more satisfactory success by disposing of his slaves as he best can, and bring free white laborers from the north. I doubt not, that he would hesitate selling them to the planters at the south; still I consider it preferable to the course he is at present pursuing. If he be an individual of fortune, and would not suffer any inconvenience from the loss of his slaves, I scarcely need remark that the purer feelings of his heart would at once dictate him to free them, when they are of a proper age.

Let this be as it may, at any rate dispose of them.

The number of free laborers required to till a farm of his description, in a manner decidedly superior to that at present, and with far more lucrative results, would not exceed twelve.

The foreman should be an individual of intelligence and education, and would demand a salary of $350 per year. The others, $125 each, most of whom might be sons of the Emerald Isle. This would make his annual expenses for labor on the farm $1725, which is no inconsiderable item, and may at first appear rather startling. But if we take the interest of the money invested in slaves, it will reduce this somewhat. He says there are some 60 or 70 around him, most of whom are slaves. Now, allowing that 56 are slaves, and supposing their average value to be $250, (I am unused to such estimations, therefore may be greatly in error, but think this low enough,) he will have $14,000 invested in slaves, the interest of which, at 6 per cent., would be $840.

Besides this, the number he will have to support will be reduced from 60 or 70 to 20 or 30, therefore the board of 40 will be saved, as well as the clothing of all, excepting his own family. The 40, at 35 cents per week for board, would cost $728 per year; and it is probable that the clothing averages $4 a-piece the year, which for the 56 would be $224.

Adding these items together, we find that his slaves cost him $1792 a year, which sum exceeds the enormous amount that free labor would cost, by $67. If the estimates were more accurately made, doubtless the difference would be far greater in favor of free labor. If this be the result, it might be asked, how would the gentleman's condition be materially improved? I answer; the number of attendants around him would be vastly diminished, and his "care and vexation" proportionally reduced. But besides this, he would with his free labor, adopt a new and improved system of agriculture, by which means the produce of his farm, would be doubled and tripled; and the fields that are already waning under that ruinous system of culture that will eventually prepare them for augmenting the list of "*Virginia worn-out lands*," will be rescued and restored to their pristine fertility, by that more recent method of tillage, that causes even the granite hills of New England to smile with luxuriant verdure.

In regard to the question whether grazing stock for market or cheese-making is more profitable, I would say that it depends entirely upon the situation and circumstances. I do not recommend that the whole energies of any farm, (unless it be a very peculiar one,) be devoted exclusively to the production of any one article; for not unfrequently, one branch of husbandry meets with reverses when others are prosperous. Therefore, it might not be improper for him to devote a portion of his farm to the grazing of stock for market, and another to the dairy. A good dairyman could be obtained for $300 per year. The necessary fixtures for cheese-making, could be erected for a sum varying from $250 to $800, depending entirely upon their extent and economical construction.

Hoping that the gentleman will conclude to deviate from the time-beaten track of his ancestors, and free himself from the thraldom of slavery, which is twofold more injurious to the master than the slave, I cordially tender him my most sincere wishes for his success. P.

Germantown, Pa.

Mineral Cements.*

Roman Cement.—It is a remarkable fact, in the history of hydraulic mortars, which originates, as we have seen, with the Puzzolana and Trass† employed by the Romans, that the more the knowledge of their uses has been spread, the more substances have been discovered, which either act as hydraulic mortars themselves, or can be mixed as cemen's in the preparation of artificial mortar; so that what appeared originally a privilege accorded to a few favored spots only, can now be obtained almost everywhere. A strong inducement to study the nature and modes of occurrence of hydraulic lime, was created by the patent granted to Parker and Wyatt, in London, in the year 1796, for what they termed "*Roman cement.*" The materials employed in the manufacture of this cement, are the nodules, of an ovoidal or globular form, which are found in the London clay, and known by the name of Septaria. They are not confined to the banks of the Thames, but are also found on on the isles of Sheppey and Wight, as well as on the coasts of Kent, Yorkshire and Somersetshire. The composition of these nodules has already been given. They are calcined in perpetual lime-kilns with coal, in which a very moderate and well-regulated heat is carefully preserved. After calcination, the stones are ground under heavy edge-stones to a very fine powder, which is sifted and then packed in casks for sale.

In the year X of the French Republic, Lesage pointed out the existence of similar cement stones on the coast of France, near Boulogne, and Drapier proved their identity with the English, by chemical analysis.

Roman cement is one of the most powerful hydraulic mortars, and is exceedingly valuable, not only on account of the rapidity with which it hardens, and this is effected in a very few minutes, but because when hardened in considerable masses, it is not liable to crack.

Since that time, similar calcareous marls have been found in numerous places, wherever pains have been taken to look for them, and have been used for similar

* From the second volume of Johnson's edition, of Knapp's *Chemical Technology*.

† Puzzolana and Trass, are porous volcanic, or pumice stones. Eds.

purposes. To give an instance of this, Kittle in Aschaffenburg, examined a series of limestones from the Spessart, and found in four different places in the neighborhood, limestone, which yielded a very tolerable mortar, and two varieties which were excellent. Hydraulic lime has occasionally been met with in the same quarry as fat lime; and its nature not having been investigated, has been neglected as useless in consequence of the slowness with which it is slaked.

All artificial or natural hydraulic limestones are soluble (before as well as after calcination) in muriatic acid, with the separation of silica, except when sand or some similar substance has been added to them.

Practical Remarks.—The hydraulic limestones, when hey do not contain a sufficient quantity of lime to be capable of slaking with water, must be very finely pulverised; it is only by this high state of division that a proper action can ensue. A thorough penetration of the siliceous portion by the lime is never entirely effected, but a certain proportion remains enclosed and removed from the sphere of action.

One point, which is very often neglected in preparing artificial hydraulic mortar, is the attention to the proper proportion between the slaked lime and cement. Both the ingredients must be mixed by measure or weight, and not merely estimated by the eye.

The best plan is to moisten the necessary quantity of cement first, and then mix the freshly slaked lime with it. The more uniformly and intimately both are mixed, the better is the result.

The hydraulic mortar employed in building the Eddystone lighthouse, was mixed by Smeaton from equal proportions of lime, slaked to powder, and Puzzolana. Trass and Puzzolana are generally mixed with half their weight of lime, as was the practice amongst the Romans. It is desirable to ascertain the best proportions by experiment in all cases where no certain knowledge of the nature of the two substances can be obtained.

Good hydraulic mortar, whether made from natural limestone or composed of lime and cement, should not show any tendency to crack when hardened under water, even when no sand is mixed with it. It then forms a very dense and solid mass, which, in a short time, neither suffers water to permeate it, nor is attacked by the water, but acquires a considerable degree of hardness. For this reason, it is well to use nothing but hydraulic mortar for those parts of walls which are constantly under water. If the mortar is not only required to harden, but also to bind well, a very important point must never be neglected, and that is to moisten the surfaces of the stones to which the mortar is to be applied. When this is not done, the surface of the stone (by its power of absorbing moisture,) dries the mortar and prevents proper adhesion from taking place. The joint then remains open to a greater or less extent.

It does not by any means follow, that because hydraulic mortar is the only durable material for building under water, it cannot consequently be used for dry walls. It is, on the contrary, of the greatest service wherever protection is required against the infiltration of moisture and damp; and dwellings or buildings can often be rendered very much less damp by a judicious application of a hydraulic coating; a layer of this kind, when once hardened, is not calculated, like ordinary mortar, to attract moisture and allow it to pass through. The hydraulic mortar must, of course, when used for covering dry walls or otherwise, be kept moist and watered, until it has acquired its proper degree of hardness. If this is not attended to, a soft, friable, useless coating is the certain result. If moisture enters from below, for instance, between the wall and the coating of mortar, it will continue confined there in consequence of the impenetrability of the latter, which, on the occurrence of a frost, will most certainly peel off and be destroyed. Care must also be taken that the mortar does not dry up of itself immediately in the air, in which case it contracts and cracks. It is, therefore, necessary to add sand or some other substance which obviates the shrinking. Hydraulic mortar will bear a very considerable quantity of sand without injury to its hardness, even as much as one and a-half times its own weight and more. This addition therefore, is important in an economical point of view. The grain of the sand employed, however, requires attention, as was the case with ordinary mortar; sharp, angular sand is decidedly preferable to blunt, rounded sand, and it is better to use a mixture of coarse with fine sand, than that the sand should be all of the same sized grain. The sand should likewise be as free as possible from earthy particles and dust. In mortar composed of lime and cement, the rule is, to proportion the sand to the quantity of cement used. Slaked lime will not bear more than a certain quantity of these substances, which quantity must not be exceeded, the cement itself being for the greater part inactive and playing the part of sand.

Hydraulic mortar that sets with sufficient rapidity, and to which a proper proportion of sand has been added, may be employed for casting tolerably massive objects, which are not subject to crack when dry. This enables hydraulic mortar to be employed for architectural ornaments which then combine great sharpness with durability, are very light as compared with similar figures of sandstone, and have the great advantage of being easily multiplied.

A similar application is that for casting water-pipes, on the spot where they are required, as proposed by Gasparin. The mould employed is a linen hose, like those attached to the fire engines, a few meters in length, which is filled with water and closed at both ends. A thick kind of bolster is thus produced, over which sand is sifted, and it is then laid upon a deposite of hydraulic lime and covered by pouring over it the same substance. When the whole has hardened, the hose is drawn forward, about the length of one foot, being left inserted in the tube, and a fresh length is cast. Water courses, thus constructed, must however, have a certain amount of fall, or the sand cannot be washed out, and will impede the delivery of the water.

When hydraulic lime is mixed with small stones, or with shingles from the bed of a river, or the sea, walls can be directly constructed of it, and a mass is obtained which resembles the erections with ordinary mortar, and is called *béton* by the French.

At Toulon, a mixture was used for the construction of the harbor, consisting of 3 parts lime, 4 Puzzolana, 1 smithy ashes, 2 sand, and 4 parts of rolled stones or shingles.

The great strength of walls, constructed with hydraulic mortar, is most clearly shown by the experiments undertaken with a view to break beams constructed of brickwork. A 25 feet long, and 2½ feet wide beam, constructed with 19 layers of bricks, bound together by Roman cement, in which, here and there, parallel strips of iron were enclosed, was capable of bearing, when supported at both ends, a weight of 22 tons suspended from the middle, before it showed any signs of fracture.

Shoeing Horses.—At a meeting of the Royal Agricultural Society of England, Professor Sewall remarked, that he frequently found old horses shod with a layer of leather, forming an artificial sole between the hoof and the shoe, recovering from severe affections, causing injury to the hoof—such, for instance, as contraction, brittleness, and cracks, or even diseases of the foot itself, as thrushes, corns, cankers, etc., and permanently regain their original elasticity and firmness.

TABLE

Exhibiting the Composition (expressed in pounds and decimals of a pound) of several kinds of Grain and Vegetables.

In answer to several inquiries, we are enabled to offer the following table, prepared by Mr. J. H. SALISBURY, who will please accept our thanks for the favor. Mr. S. informs us that the composition of the oat was calculated from analyses made by Prof. Norton; that of the barley, millet, and inorganic part of the sweet potato, from analyses made by Prof. Emmons.

	Winter Wheat grain.	Rye Grain.	Two-rowed Barley grain.	Oat grain. Hopeton.	Millet grain.	Buckwheat grain.	Grain of the Rhode Island Sweet Corn.	Grain of the Tuscarora Corn.	Grain of the Chinese tree Corn.	Tuber of the Mercer potato.	Tuber of the Sweet potato.	Drum Head Cabbage.	Fruit of the Large Red Tomato.	Fruit of Egg Plant. Oval-shaped purple.
	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain
Starch,	613.300	527.50	330.71	656.40	337.30	415 50	149.918	459.6796	485.3941	96.50	184 23			4.0220
Albumen,	44.720	24.40	32.48	4.60	80.24	65.50	120.739	77.9791	59.8789	2.49	54.47	17.40	1.831	3.4383
Coagulable Albumen,		22.60				98.70	2.186	1.2077	12.2024		19 40	8 80	2.851	13.1467
Casein,	2.730	4.00	17.02	158.60	46.65	7.80	24.467	1.5527	1 6561	4.68	9.70	3.60	1.805	2.6967
Gluten,	44.600	11.30	20.29	24 80	40.40	26.00				2.05				
Zein,							34.137	44.5964	34.6025					
Tartaric, citric and malic acids,													28 948	
Sugar and Extract,	115 750	80.30	56.62	45.60	98 68	60.10	192.216	87.7265	92.9025	26.34	53.49	92.20		40.9500
Oil and Fatty matter,	10.500	63.80	19.15	54 90	20.00	4.70	91.731	45.8800	38.6991	0.84		1.60		
Wax,													4 769	
Dextrine and gum,	24.000	20.40	63.16	21.20	40.80	16.00	114.133	36.6605	38.2032	12 63	6.93	10.90	8.806	4.9889
Fiber,	34.100	111.40	155.91	11.90	195.65	140.90	118.973	107.3075	108.0012	57.99	17.09	30.90		10.2476
Chlorophyl, with a little starch,														
Bran,			140.50											
Gum resin,											2 07			
Water,	93.800	124.00	108 16		107.28	128.80	136.600	122.2000	113 6000	791.09	641.72	856.20	947.58	913.5300
Amount of organic bodies and water,	983.50 lbs	989 70lbs	964 lbs.	978.1bs	966.lbs.	964 lbs	977.4 lbs.	984 8 lb.	985.2 lbs.	994.61 lbs.	989.10 lbs.	991 60 lbs.	986.59 lbs	993.96 lbs
Carbonic acid,													0.3817	0.2889
Silicic acid,	0 309	0.392	8.64	0.42	15.63	0.72	0.256	0.1178	0.2536	0.25	0.24	0.06	0.0606	0.1038
Sulphuric acid,	0.162	0.495			trace	0.57	0 125	0.1938	0.1594	0.36	0.16	1.12	0.0611	0.2898
Phosphoric acid,	8.856			11.06		18.19	10.177	6.8586	7.3100			1.27	0.8401	1.7593
Peroxide of iron,				0.19										
Phosphate of peroxide of iron,		0 668	15.14		12.19							0.12		
Phosphates of lime and magnesia,		3 635								2.23	2.78			
Phosphates of potash and soda,		0.694	5.88		0 22									
Lime,	0.009	0.707		1 20		1.11	0.076	0.0509	0.0918	0 01	0.08	0 29	0.0026	0.0046
Magnesia,	2.703	0 127		1.95		5.67	2.954	1.9670	2.4075	0 04	0 07	0 35	0 0549	0 0828
Potash,	1.302	1.922	4 36	7.10	2.53	7.76	2 966	2 2045	1.9212	0.78	6.37	2 09	0.7191	1.2496
Soda,	3.075	0.938	1.98		2.91	0.86	5.301	3.2029	2.2849	1.45	0.66	3 02	0 8899	1.9525
Sodium,	0.033												0.0952	0.0686
Chloride of sodium,		0.076		0.08						0.67				
Chlorine,	0.051				trace.	0.12	0 061	0.0684	0.0651		0.54	0.08	0 1472	0.1057
Organic acids,		0.694			0.52	1.01	0 684	0.5361	0.3065				0 1576	0.1341
Amount of inorganic bodies,	16.500 lbs	10.3 lbs	36.lbs	22.lbs	34.1bs.	36.1bs	22.6 lbs.	15.2 lbs	14.8 lbs	5.79 lbs	10.9 lbs	8.4 lbs.	3 41 lbs	6.04 lbs
Total,	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs	1000 lbs	1000 lbs.	1000 lbs	1000 lbs.	1000 lbs.	1000 lbs	1000 lbs.

Improvement of the Soil.

Renovation of Lands.

EDS. CULTIVATOR—It appears as though there was an absolute ignoranee amongst farmers, of the relative value of the various kinds of manures; and especially so amongst those whose means enable them to have acquired the most accurate information. Is there any one who can even tell us how much more he will raise from an acre of land manured with six cords of stable manure, throughout a course of farming for four or five years, than he would from the same land not manured at all? Can any one tell what increase will result from liming land? Or can any definite result be predicated from the application of bones, poudrette, guano, or any of the various kinds of fertilizers now in use? That the application of these various manures will produce a great effect is known to us all; but which will soonest repay the cost, which last the longest, or which will best suit the various kinds of soils, is as yet a mystery to the generality of farmers.

But enough of this carping and fault-finding. And that I may practice as well as preach, I will give you a short history of some of those who, I think, have pursued the true system; even though, according to some learned Thebans, it is one that will not pay.

Nearly twenty years since, there was a farm of about sixty acres, so poor as almost to defy description. The best comparison I could give, would be some of the worn-out, or as they call them, the "tired lands" in the southern states. The owner was a young lady, and she attempted to manage the farm when it came into her possession, in the same manner as it had been managed by those from whom she inherited it—without having any pecuniary means, other than its resources. She hired a farmer, and for some years they plowed and re-plowed the same worn-out and exhausted fields, and gathered in the same poverty-striken crops, which had been gathered in, "from a time beyond which the memory of the oldest inhabitant runneth not to the contrary." The result was as all foretold, she was compelled to quit farming. Amongst her creditors was her farmer, I believe almost the only one of any magnitude, and to *pay him off* she married him,—at least so the story went. Again they started fresh with the world; but still it would not do. The same incubus was pressing upon them. They toiled early and late, lived prudently and economically; but notwithstanding all, they could not make both ends meet, and were fast coming out of the little end of the horn. Their true friends urged them to raise money on the lands and improve it, so that at least, they might be paid for their labor; but this, although the only true policy, was a policy running counter to all their preconceived opinions. They said, as others before them have said, it would not pay. At last they did what under the circumstances, and with their views of policy, was perhaps the only prudent thing they could do—they sold the property.

It was purchased by a hard-working practical farmer, one who had previously had some experience in renovating worn-out lands. The price given was, I think, sixty dollars per acre,—hardly the value of the buildings upon it. Instead of doing as his predecessor had done, he mortgaged it, for a part of the purchase money, and took the balance of his means to improve the soil. In order to effect this object, he hauled stable manure from the city of Philadelphia, a distance of ten miles, for which he paid about three dollars the two-horse load; that is, what two horses could draw on the pavement, and three or four off. I cannot give the quantity he put to the acre; I think it was five or six of these loads. He continued this practice for some six or eight years, at the end of which period, he was offered more than twice what he gave for the farm.

It is hardly necessary to say, it was then a farm of altogether a different character. Old fields, which formerly produced nothing but sorrel or moss, were then verdant with the richest grasses, or covered with the most luxuriant crops; old fruit trees, which had been, under the former owners considered as almost worthless, then sprung into new life, and brought forth excellent fruit. And everything, both animal and vegetable, betokened prosperity and abundance. All this was effected, mark you, whilst at the same time, the owner was yearly making his living from its proceeds. It has been but a short time since his son told me, they made money faster then, than at any other time; "because," said he, "although we did not lay by any money, yet every year our land was becoming more and more valuable. The owner, now an old man, is living independently and comfortably; he has the fattest horses, the best cows, and the finest crops of any one around him.

In my last communication I mentioned an Englishman, who farmed Mr. W.'s farm. He is one of my standing examples of the benefit of this system of farming. About ten years since, he, then a hired farmer, leased from a Mr. S. in Philadelphia, who kept a livery stable, a miserably poor farm, with a bleak northern exposure, on Chestnut Hill, near Germantown. The conditions of the lease were that Mr. S. was to find the manure, and that Mr. H. (the farmer,) was to cart it to the farm. He had saved from his hard earnings, a few hundred dollars, barely sufficient to purchase a few of the most indispensible farming implements. You can judge how limited his resources were, from the fact that the loss of one of his horses threw him on his "beam ends," until his friends advanced him money to replace his loss. But he boldly met the disheartening circumstances of his situation; and, as he afterwards told me, it was as much as he could do, with the most rigid economy, to keep himself from sinking. To use his own words:—Whenever he could get a day's work for himself or his boys, from his neighbors, he took it, and thus earned a little money for his family, and when he could not, he would haul up a load of manure from the city. When I last saw him, some three years since, he was surrounded by all that a farmer could desire; his yard was stocked with fine cattle, his horses were excellent, and in fine condition; his implements were good, and in their places; and to sum up all, he had the appearance of being a forehanded farmer, and one "well to do" in the world. It really made my heart glad to see this man, whom I had known, as a stranger in a strange land, and toiling day by day for his daily bread, now comfortable, independent and happy; and taking rank in his social position, with those who form the most numerous and respectable portion of the community.

A farm, which is, perhaps, the very best in this county, was made so, by following the method I have pointed out. Many years since, Mr. C., who had been an orphan boy, had some money left him by the person who brought him up. With the money, he purchased a piece of land about eight miles from the city, containing about thirty acres. When he purchased it, it was thin, and if not in the lowest condition to which it might have been reduced—yet too poor for any one to make money from it by farming in the usual manner. He, also, pursued the same system, and though some may have deemed him unwise, the result was, he made his living from the land, whilst at the same time he was changing its appearance. It would be fruitless to attempt any description of the high degree of fertility to which it has now been raised. You can form some idea of its productiveness when you learn, that for years past, he has been putting by his five hundred or a thou-

sand dollars a year, clear money, after all his farming expenses have been paid. Nor does he live in a miserly manner; but on the contrary, is rather famed for his liberality in household matters. It is a fact well known in the neighborhood, that he raises as much from this small lot of land, as is raised by the average of those who cultivate their hundred acres. This result has been produced, solely by the use of stable manure. He keeps no fancy stock; he pursues no different routine of cultivation from that pursued by others around him; but he manures his lands without stint.

If it were not that it would be trespassing on your columns, and on the patience of your readers, I could give you instances by the score, where some, who have not been afraid either of the labor or expense of doing as those I have mentioned have done, have succeeded in renovating their worn-out fields, and are now living comfortably upon the income of their productive farms. And where others, who were afraid it would not pay—that the price of the manure was too high,—the labor of procuring it too great, have continued in the same situation in which they were when they first started out in life. PENNEPACK. *Lower Dublin, Pa.*, 1849.

New-York State Agricultural Society.

State Fair.

We make the following abstract of the report of the Executive Committee, at the meeting of the Board, July 12th, 1849.

The secretary reported that since the last meeting he had visited Syracuse, and that the citizens are taking active measures to prepare the grounds and buildings for the use of the society in September. A contract for enclosing the grounds, and preparing the necessary erections, has been made with an efficient and thorough business man, and everything required by the Society, it is believed will be in readiness. The committee of arrangements on the part of the citizens, are making every possible effort for the accommodation of visitors, and nothing on their part will be left undone to accommodate those who may be in attendance.

The secretary also reported, that the judges who had been appointed for the annual exhibition, had with very few exceptions, signified their acceptance, and the few vacancies had been supplied by gentlemen who had agreed to be present. At no former period have the indications of a large exhibition in all the departments, been so encouraging as at the present.

T. Ewbank, Esq., Com. of Patents, in answer to an invitation to attend the Show and Exhibition at Syracuse, writes:—"An occasion so peculiarly attractive to those who watch with interest the progress of agricultural improvement,—a subject, the vast importance of which it is scarcely possible to magnify—could not fail to afford me the liveliest gratification—a gratification which, with what sincere regret I need not say, my official duties will, I fear, compel me to forego.

"I shall derive much pleasure, however, from reading reports of the Exhibition, which will, in some measure, atone for the disappointment I feel in not being able to meet personally, the many intelligent gentlemen who will assemble from various parts of the country, upon so interesting an occasion."

THE CROPS, &c.—N. Goodsell, of Rochester writes: That he had visited several counties of the north, and that considerable portions of Jefferson, Lewis, and Oswego counties, are becoming rich in agricultural products—some of the best dairies and finest stock are found in the above districts; but there is great want of information respecting our State Agricultural Society's proceedings. Many farmers with large dairies, have never attended a State Fair. I obtained from one nearly a full promise that he would take a wagon load of butter and cheese to Syracuse. Much of the country in these counties is very fine for grass, oats, barley, Indian corn and potatoes, superior to the major part of this State. I have made particular examination of the extent of our Peach district, east, and find it reaches upon the lake for six miles back to Salmon river, lowest range of thermometer 8° below 0, in all of which territory trees are as healthy, and as well filled with fruit as at Rochester. Two miles north of this line the thermometer falls 20° below 0°.

R. Howell, of Nichols, Tioga county, says, date 26 June, the weather for the last week, has been as dry and warm as any ever experienced here. Spring was very late, cold and dry, particularly the month of April. The 14th of the month the ground was so dry that it was scarcely possible to plow—and a week from that time so cold that the plow was frozen in the furrow. On the 17th it snowed, and on the hills snow was 16 inches, and half that depth on the flats. The crops now look fine, wheat is of fine color, large growth. It was feared that the Hessian fly had committed ravages upon the crop—but I cannot find any signs of the fly. In some grounds, injury has been caused by a grub eating off the large roots of the wheat. Rye much better than usual. Corn and oats are good, though backward. Grass is very heavy, especially new meadows.

John Johnston, Esq., of Seneca county, one of our best farmers, writes, June 25th, "I have made nearly 1500 rods of tile drains since you was here last fall, (in Sept..) and am carrying on farming more thoroughly than ever I did; but am warned by age and infirmity that I must do less. I fattened 83 head of cattle last winter, have sold 62 of them, part in February and part in May, at over $50 per head—(steers 4 years old last spring.) Eighteen of these I have on hand, and they are worth over $50 each. I get well paid for my corn, hay, corn stalks &c.; and I have got such a lot of rich manure as few men in Western New-York ever made in one season.

"Some of my neighbors who said I must be a great fool to bury so much money in drains, are now ordering tiles, some 2,000, some 5,000, &c. Draining will do more to improve the agriculture of the State than all else combined. The difference in the cost of cultivating drained land, from that undrained, is very great. Drained land can be worked much earlier in spring, and the work much easier for man and team. *One plowing* will pulverize the land better than *three plowings* when the land is inclined to wet, even if not very wet.

"I have now laid (or at least have the drains dug, though all the tiles not home yet) about 40,000 tiles since 1841. What I laid previous to that time I have no account of, but it was not many. A little over 13 tiles will make a rod, of course, I have laid a great many rods for an American farmer. I think I have about half done what I intend to do; if I have tolerable health, I can, in three years, lay 40,000 tiles, and there is no difficulty in obtaining men to dig the drains."

"Mr. J. says:—"The weevil (wheat midge) has made its appearance among our wheat crops, more especially in the east and north of our county, immediately in this neighborhood. I think there will be no serious loss this season."

A letter from John Delafield, Esq., President Seneca Ag. Society, gives us the agreeable intelligence that the efficient society of that county, have passed a resolution inviting Prof. Johnston to deliver their annual address on the 5th of October next. Mr. D. also writes that it is probable the society will, if practicable, secure Prof. Johnston to deliver them a course of lectures on agriculture.

[We are much gratified by this movement on the

part of this Society. It shows that the right spirit is abroad, and that the farmers of this small county are alive to their own best interests. It is to be hoped that some of our larger counties with funds idle in their treasury, will make a like arrangement, which will return tenfold more to their societies, in the benefits to agriculture, than the small amount required to secure the services of Prof. J.]

Letters were read from the officers of several Canadian Agricultural Societies, from the officers of the Board of Agriculture of Ohio, and from the societies of other states, giving notice of the appointment of delegates to attend the exhibition and fair of the N. Y. State Society, at Syracuse.

The Veterinary Department.

Spaying Cows.

At the request of a correspondent, we give the following extract, in regard to the operation of spaying cows, from a lecture of MORIN, a French veterinary surgeon:

'Having covered the eyes of the cow to be operated upon, we place her against a wall, provided with five rings firmly fastened, and placed as follows:—the first corresponds to the top of the withers; the second to the lower anterior part of the breast; the third is placed a little distance from the angle of the shoulder; the fourth is opposite to the anterior and superior part of the lower region, and the fifth, which is behind, answers to the under part of the buttocks. We place a strong assistant between the wall and the head of the animal, who firmly holds the left horn in his left hand, and with his right, the muzzle, which he elevates a little. This done, we pass through and fasten the end of a long and strong plaited cord in the ring, which corresponds to the lower part of the breast; we bring the free end of the cord along the left flank and pass it through the ring which is below and in front of the withers. We bring it down along the breast behind the shoulders and the angle of the fore leg, to pass it through the third ring, from there, we pass it through the ring which is at the top of the back; then it must be passed around against the outer angle of the left hip, and we fasten it, after having drawn it tightly to the posterior ring by a simple bow knot.

'The cow being firmly fixed to the wall, we place a cord, fastened by a slip-noose around its hocks to keep them together in such manner that the animal cannot kick the operator, the free end of the cord and the tail are held by an assistant.

'The cow, thus secured, cannot, during the operation, move forward, nor lie down; and the veterinary surgeon has all the ease desirable, and is protected from accident.

'M. Levrart advises that an assistant should hold a plank or bar of wood obliquely under the teats and before its limbs to ward off the kicks; but this method is not always without danger, both to the operator and the animal, because, at the commencement, that is, when the surgeon makes the incision through the hide and the muscles, the cow makes such sudden movements, and tries so frequently to strike with its left hind foot, that it may happen that upon every movement, the plank or the bar may be struck against the operator's legs.

'On the other hand, although the defence may be firmly held by the assistant, yet it may happen, that in spite of his exertions, he sometimes may be thrown against the operator by the movements she may attempt, and there may be an uncontrollable displacement of the plank or bar; and then it may happen that she becomes wounded, and at the same time prevents the operation, while, by the mode we point out, there is no fear of accident, either to the operator or the beast.

'In case of the want of a wall provided with rings, we may use a strong palisade, a solid fence, or two trees a suitable distance apart, across which we fix two strong bars of wood, separated from each other, according to the size of the cow.

'There is another means of confining them that we have employed for some time past, where the cows were very strong and irritable, more simple than the preceding, less fatiguing for the animal, less troublesome to the operator, and which answers perfectly. It consists—

'First. In leaving the cow almost free, covering her eyes, holding her head by two strong assistants, one of whom seizes the nose with his hand and strongly pinches the nostrils, whenever the animal makes any violent movements during the operation.

'Second. To cause another assistant to hold the two hind legs, kept together by means of a cord passed above and beneath the hocks; this assistant also holds the tail and pulls it, whenever the animal seeks to change its place.

'The cow being conveniently disposed, and the instruments and appliances, such as curved scissors upon a table, a convex edged bistoury, a straight one, and one buttoned at the point, suture needle filled with double thread of desired length, pledgets of lint of appropriate size and length, a mass of tow (in pledgets) being collected in a shallow basket, held by an intelligent assistant, we place ourselves opposite to the left flank, our back turned a little towards the head of the animal; we cut off the hair which covers the hide in the middle of the flanks, at an equal distance between the back and the hip, for the space of thirteen or fourteen centimetres in circumference; this done, we take the convex bistoury, and place it opened between our teeth, the edge out, the joint to the left; then, with both hands, we seize the hide in the middle of the flank, and form of it a wrinkle of the requisite elevation, and running lengthwise of the body.

'We then direct an assistant to seize with his right hand the right side of this wrinkle; we then take the bistoury that we held in our teeth, and we cut the wrinkle at one stroke through the middle; the wrinkle having been suffered to go down, a separation of the hide is presented of sufficient length to enable us to introduce the hand; thereupon we separate the edges of the hide with the thumb and forefinger of the left hand, and in like manner, we cut through the abdominal muscles, the *iliax* (slightly obliquely) and the *lumbar*, (cross) for the distance of a centimetre from the lower extremity of the incision made in the hide; this done, armed with the straight bistoury, we make a puncture of the peritoneum at the upper extremity of the wound; we then introduce the buttoned bistoury, and we move it obliquely from above to the lower part, up to the termination of the incision made in the abdominal muscles. The flank being opened, we introduce the right hand into the abdomen and direct it along the right side of the cavity of the pelvis, behind the *cul de saurumen* (paunch) and underneath the rectum, where we find the *cornes de l'uterus*, (matrix;) after we have ascertained the position of these viscera, we search for the *ovaries* (organs of reproduction,) which are at the extremity of the *cornes*, and when we have found them, we seize them between the thumb and forefinger, detach them completely from the ligaments that keep them in their place, pull lightly, separating the cord, and the vesses (uterine or fallopian tube) at their place of union with the ovarium, by means of the nail of the thumb and forefinger, which presents itself at the point

of touch; in fact, we break the cord and bring away the ovarium.

'We then introduce again the hand in the abdominal cavity, and we proceed in the same manner to extract the other ovaria.

'This operation terminated, we, by the assistance of a needle, place a suture of three or four double threads waxed, at an equal distance, and at two centimetres, or a little less from the lips of the wound, passing it through the divided tissues, we move from the left hand with the piece of thread; having reached that point, we fasten with a double knot, we place the seam in the intervals of the thread from the right, and as we approach the lips of the wound, we fasten by a simple knot, with a bow, being careful not to close too tightly the lower part of the seam, so that the suppuration which may be established in the wound, may be able to escape.

'The operation effected, we cover up the wound with a pledget of lint, kept in its place by three or four threads passed through the stitches, and all is completed, and the cow is then led back to the stable.

'It happens, sometimes, that in cutting the muscles, of which we have before spoken, we cut one or two of the arteries, which bleed so much that there is necessity for a ligature before opening the peritoneal sac, because, if this precaution be omitted, blood will escape into the abdomen, and may occasion the most serious consequences.'

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

The New-York and Buffalo Fruit Conventions.

From the various articles which have appeared in *The Horticulturist*, and other periodicals, it appears quite evident there is a very erroneous opinion abroad, as to the friendly attitude of these two conventions. From considerable knowledge of both, we believe the assertion may be safely made, that not five persons, having any connexion with either, desire any rivalry, or wish to assume any hostile attitude towards the other.

Both conventions had been proposed some months before their actual session, and both were very interesting and important bodies The writer, who took a much more active part in that at Buffalo, will not from this fact, be accused of partiality when he states that the New-York Convention embraced by far the larger number of eminent pomologists, and for this alone, must by common consent, be regarded as the leading pomological organization in America. It is but justice to those who took an active part in the convention at Buffalo, to state that nearly if not quite all of them so regard the New-York organization. And with this general feeling pervading all parties, we cannot but believe that the approaching convention at Syracuse, will adopt such a course as cannot be construed into an assumption of any hostile bearing.

A single explanation as to the propriety of two distinct conventions—for the east and west, as demanded by the differences of soil, climate and locality. The following facts would indicate that this difference is overrated. Of the *twenty-seven* varieties of the apple, recommended as first-rate by the Ohio Fruit Convention, held last year at Columbus, all except *four* are cultivated in the Eastern States, where even one or two of these four originated. As for the Buffalo Convention (held at the extreme western point of the State,) being peculiarly adapted for the west, it may be stated that the best and most extensive collection of pears, by far, exhibited at that convention, was from Robert Manning, of Salem, Massachusetts; the most extensive collection of plums, by far, was from Charles Hamilton, of Orange Co., N. Y.; and the largest collection of apples was from Charles Downing, of Newburgh, N. Y. We think it will hardly do, yet, for either section to cut loose from the other.

Inquiries.

Sweet Apples.—Will you inform me of the best varieties of *sweet apples*, to ripen in succession to cultivate for stock feeding? *A. Williams, Gaylesburg, Ill.*

For Summer,—Bough and Golden Sweeting.

For Autumn,—Jersey Sweet, Summer Sweet Paradise, Haskell Sweet.

For Winter,—Danvers Sweet, Tallman Sweeting, Sweet Russet of Western N. Y.

Long-Keepers,—Hartford Sweeting, Green Sweeting. The Ladies' Sweeting is a fine and beautiful apple, a most abundant bearer, and a long keeper, but the growth of the tree is too slow to adapt it for stock feeding.

Pear Orchards.—I have just finished planting a pear orchard of over one thousand trees, mostly large seedlings, which I intend to graft in the top; please let me know your opinion about this method—will the trees be as hardy as when grafted at the ground?—I propose putting three to six grafts into each tree, or enough to fill the principal limbs. *H. Avery, Burlington, Iowa.*

Seedling pear trees usually furnish hardier trees than a large portion of the grafted varieties, and hardier trees would probably in most cases be obtained by grafting the seedlings at standard height, as proposed. If the stocks are already of considerable size, the grafts would make a more rapid growth, and sooner come into bearing. But on the other hand, this rapid growth would render them more liable to destruction by the cold of winter, or to death by frost-blight, which should be guarded against by avoiding summer pruning, or any other cause tending to produce a late growth of wood, and by placing them in a deep, moderately dry soil, which shall furnish a uniform supply of moisture through the summer, and favor the thorough ripening of the young wood before winter.

Market Apples.—What are the best five varieties of apples for an extensive orchard for shipping? Is the Tewksbury Blush one of them? *A Western Fruit Raiser.*

Apples for distant market should not only be such as would keep well, but should be of the finest quality, so as to bring the highest price, and thus avoid as much as possible the contingency of the expenses of transportation consuming the profits. Hence the Baldwin and Rhode Island Greening, though so well adapted to New England and New-York, may not do well for the west where their quality more or less deteriorates. The Tewksbury Blush, although an admirable keeper, and very productive, is small, and not quite first-rate in quality. It has been found very profitable in the neighborhood of Philadelphia. Perhaps the following may succeed best for the western states:—Red Canada, or Old Nonesuch, Roxbury Russet, Newtown Pippin, (on strong lime soils,) Northern Spy and Jonathan.

Sending Buds by mail.—How long will buds keep fresh and good, packed in the best manner? *A Williams, Gatesburg, Ill.*

The period varies with circumstances, and with the kinds. Well-ripened shoots, of compact or horny growth, as the Gravenstein apple, and Summer Bonchretien pear, if kept moderately moist, will remain in good condition often two or three weeks or even much longer. But early-cut buds, of the peach, cherry, and other spongy kinds, may not keep half that time. As

a general rule, buds cut near the close of summer will remain uninjured nearly twice as long as when cut five or six weeks earlier. Cool weather is more favorable than hot. Buds of any sort should not be usually cut, unless sufficiently matured to keep safely for five or six days.

Buds may be sent by mail in a letter, by wrapping them closely in thin oil-silk, so as to enclose perfectly all the moisture; or they may be preserved in larger packages for express, in fine, moderately moist sawdust, but not so large as to favor fermentation, which would spoil them.

Strawberries—Extracts from Correspondence.

The diversity of opinion relative to the merits of different varieties of the strawberry, is doubtless owing to the peculiarities of climate as well as of culture. The results obtained by experienced cultivators in different localities, hence become valuable in enabling us to assign to each variety its true position:—

F. R. Elliott, of Cleveland, Ohio, says "I regard the variety known as the *Willey** as being superior in all respects for general culture. As regards its productiveness, I consider it a variety that will yield, when grown in common soil, and with common every-day, kitchen-garden care, two quarts to one, of any other variety I have tested, except the *Dundee*. In size, it is only medium between Hovey's Seedling and Old Scarlet. Next to this in point of productiveness, (as grown in common garden soil,) I consider the Dundee. Next, *Hovey's Seedling*; and this variety, if given *extra stimulus* in soil and culture, will yield a large product. But such can rarely be looked for, and as it is somewhat tender, not well withstanding winter rigors unless slightly protected, I do not regard it valuable, except where the same stimulus is given it which was given the original plants in Hovey's garden. *Burr's Seedling* [staminate] is a fine fruit, of size between Hovey's and Cincinnati Hudson, of a good flavor, and bears about the same as Ross' Phœnix. *Myatt's Eliza* I regard as the best and highest flavored berry grown, but two years' trial have induced doubts as to its productiveness.† In flavor, it has no equal.

A. H. Ernst, of Cincinnati, (President of Cincinnati Horticultural Society, has favored us with the following remarks on some celebrated varieties:—"The *Black Prince*, of which so much has been said, has disappointed us very much; the plants are not hardy enough for our hot summers' sun, and changeable winters. It cannot, therefore, be worth much to us. *Jenny's Seedling* has proved perfectly hardy, a prolific grower, late bloomer, large trusses of medium but uniform sized fruit, with a sharp acid, but fine flavor. The flesh is firm, which is a desirable point for a market fruit. I think it will prove one of the best of the numerous sorts. It is a pistillate, originating at Boston. *Burr's new strawberries*, as with most other new sorts, have been overrated. His *New Pine*, I think, will prove a great disappointment, as it is *hermaphrodite*, that is, having pistils and stamens in the same bloom. It will fruit, but this can never be so large or so numerous as that of a pistillate.‡

"*Our Old Hudson still stands unrivalled* for the market gardener. No other sort, with the rude treatment it receives, will produce so much large and fine fruit. This is quite a consideration in a country where the refinements of cultivation have as yet hardly made an entrance."

Thomas S. Pleasants, an eminent practical horticulturist of Petersburgh, Va., says, "This fruit attains to great perfection in this climate, and is of the easiest culture. The most productive varieties are the *Scarlets*, the organs of which are, I believe in all cases, perfect. *Hovey's Seedling* sometimes bears great crops, but not uniformly. *Keene's Seedling* is a shy bearer, but the fruit is enormously large. All productive kinds do well.

Dr. W. D. Brinckle, of Philadelphia, says, "The *Early Scarlet*, *Hudson*, and *Hovey's Seedling*, are the kinds chiefly cultivated here, and are fine varieties. Still finer are the true *Keene's Seedling* and *Ross' Phœnix*, but they are unproductive and too tender for our climate."

* And which closely resembles the *Old Hudson* of Cincinnati.
† We have found it so unproductive as to be of no value.
‡ In Western N. Y. it has proved very productive, but needs further trial.

Management of Young Apple Orchards.

The following mode of treatment of a young apple orchard, transplanted in the spring of 1848, by which all lived and made a vigorous growth, has been furnished by J. Talcott, of Rome, N. Y.—

Last year the ground was planted with potatoes; in the fall, after the crop was off, it had a heavy top-dressing of horse manure, drawn from the village and plowed under. The trees were earthed up to protect them from mice. This spring, the ground was cross-plowed, and it is now sown to carrots, parsnips, onions, and some beans planted among them; the ground has been forked around the trees for a circle of about five feet. They are making a fine growth. The stems have been washed with diluted soft soap.

Horticultural Items.

Tender Shrubs.—D. Thomas, in his Buffalo Address, says, "Some shrubs suffer much from exposure to cold winds. In the open ground, the White Antwerp raspberry has been much injured—while ten rods under the lee of red cedars, it has done well. The common laburnum may illustrate the same doctrine. One which stood in a door-yard, exposed to the west winds, was damaged every winter, until a building was erected very near it, so as completely to shelter it on that side, and from that time, during seven years, it has not been injured."

Shade Trees.—Hill's Monthly Visitor states that two elm trees, two inches in diameter, were transplanted in 1836, and in 1847 were 45 inches in circumference, or 14 inches in diameter. The elm in that region is of very rapid growth. In a less favorable locality, a gentleman has raised elm trees with little care, five inches in diameter in eleven years, from seed. On account of the better and thriftier growth of seedlings raised in the garden, some have found that shade trees could be obtained as soon from seed, as by transplanting from the woods. This is the season for looking out for the seed.

Fruit at the South.—A correspondent of the *Southern Cultivator* (Ga.) says, "There are annual importations of fruit trees of the choicest varieties, from France and England, and from the Northern States. I have planted apples, pears, plums, apricots and almonds from France, and peaches and nectarines from the North; and of the whole, there is not one tree that has borne fruit equal in quality or quantity to our common native kinds." This is, doubtless, generally true—there are, however, a very few exceptions.

The attempt has been made to introduce exotic grapes largely at the South, with the belief that they would be peculiarly suited to the milder climate of that part of the country; but for out-door culture, they succeed even worse than at the North, being eminently liable to the rot and mildew.

European Nurseries.—According to the statements of P. Barry, some of the most eminent European nur-

serymen, particularly on the continent, have been in the practice of growing trees for sale, for the last half century, without knowing by sight half a dozen of the hundreds in their catalogues. A large and noted establishment, which has sent trees largely to nurserymen in this country, it appears, does not raise a single tree, but purchases at reduced prices from smaller nurseries. No wonder then, that so *large a majority* of the trees sold from most establishments here, should either prove misnomers, or of second or third quality, for without a continual check, by proving the sorts, errors must multiply and continue to multiply to a considerable extent, as they have done.

Planting and Building.—It was very just remark of an eminent author, "the works of the person who builds begin immediately to decay; while the works of him who plants commence immediately to improve." Lord Bacon also remarked, "When nations arrive at civility and elegancy, men come to build stately sooner than to garden finely, as if gardening were the greater perfection."

Curious!—A neighboring periodical of high standing, soberly copies a story of grafting the grape, by splitting the shoot and bud in half, from a white grape vine, and joining it to a corresponding half from a black grape vine, which after great difficulty was made to grow, and yielded white and black fruit on the same bunch, and others variegated. Now, the most feeble glance at the laws of vegetable growth, should satisfy any person, that if two buds, cut right through the heart, could, after such formidable mutilation, be made to grow, one whole side of the vine, branches and all, would be the white, and the other side, the black variety, as much so as if two distinct grafts or buds were set, without thus cutting them.

Weeds in Gravel Walks.—An English gardener, has for more than ten years past, kept down the weeds in gravel walks, without any apparent bad effect, by sprinkling over them annually dry salt, in dry weather, and then sweeping it thinly and regularly with a broom.

Horticulture.—R. C. Winthrop, speaking of the achievements of this "fine art of common life," says, "It decorates the dwelling of the humblest laborer with undoubted originals, by the oldest masters, and places within his daily view fruit pieces such as Van Huysen never painted, and landscapes such as Poussin could only copy."

A Profitable Orchard.—The *American Agriculturist* says, "A gentleman within our knowledge has a small orchard on the Hudson river, of less than 7 acres which produces from $500 to $750 worth of apples annually. This is not 1 year of plenty, and another or two of famine, but is a regular, steady, average yield. All this is secured by the simplest process, viz. good management."

Another Orchard made profitable.—An old orchard of four acres had not been plowed for nearly 30 years, and was regarded by the neighbors as worthless. It did not yield more than eight barrels a year. It was well plowed, and thoroughly manured for three successive years, and cultivated with crops. It then produced *two hundred and eighty barrels of apples.*

Curculio.

L. A. Spalding of Lockport, has addressed a letter to our old correspondent, David Thomas, relative to the curculio, from which we take the following paragraphs. It has been long known that this troublesome insect avoided pavements, (*Gen. Farmer*, vol. ii. p. 227,) neither would it venture on a tree that leaned over the water (*Gen. Far.*, vol. ii. p. 219;) but we are satisfied that the extracts will prove interesting to pomologists. Whether this method is cheaper than jarring the trees, and catching the curculio on sheets, may admit of a doubt, for boys soon become very expert at this business.

The idea has occurred to us whether platforms made of light boards to fit closely round each tree, would answer the same purpose. These might be laid down when the trees where in blossom, and removed after the lapse of a month or six weeks. Who will try the experiment?

"I promised to give thee the result of my experiment of paving under *apricot* and *plum trees*, to prevent the attacks of the curculio. For seven years previously I could raise none of the former, and but very few of the latter; but the trees which I protected in this manner, have borne abundantly every year, while those in the same row which are not flagged have borne nothing.

"My trees are ten feet apart in the row, and the rows twenty-four feet apart, running east and west. After manuring a strip under the trees ten feet in width, I covered it with leached ashes two inches thick, and in the ashes I laid flat stones—though brick would do as well—and to prevent the grass and weeds growing, I sowed fine salt over the stones two or three times a year, sufficient to kill the grass; and if by the action of the weather, the joints between the stones became open, I filled them with ashes. I wash my trees once or twice a year with tobacco juice and soft soap, adding a small quantity of salt.

"This year the trees are loaded as usual. Some of the apricots are marked by the curculio, but hardly enough to thin out the fruit as it should be. Such as drop off, are swept up, and given to the hogs. Should any be left, the worm could only find shelter among salt and ashes.

"This plan is cheaper than *jarring the trees*, and much more effectual, unless more perseveringly pursued than I could do."

A Curculio Catcher.

Eds. Cultivator—I send you a description of a curculio catcher different from what I have seen figured or described in any article on the subject, and which I think is a decided improvement on anything used for the purpose. It consists of a square of sheeting or cheap cotton cloth; the size to correspond with the tops of the trees which it is to be used under; one side of the cloth is to be nailed to a straight pole with carpet tacks; the opposite side is also to be nailed to a pole with a division or joint in the middle, and an opening in the cloth to the centre, which is to be occupied by the trunk of the tree. The ends of the poles at the joint are to be fitted with a ferule or socket, into which each end is to be inserted; one end to be fastened permanently, the other so that it can be taken out when the sheet is to be placed around the tree and then put together again, which brings the opening in the sheet together, leaving no space for the insects to drop through. It will be seen that this article is convenient to be handled by two persons, a third person is required to jar the trees. Those who are willing to devote a few hours to this kind of work, may be sure of saving their crop of plums, apricots and cherries, which are often lost from inattention or lack of facilities for catching the *critters* which cause the fruit to fall prematurely from the trees. The stick which is used to jar the trees with should be covered over the end with several thicknesses of cloth, to prevent the branches from being bruised.
I. Hildreth. *Big Stream Point, June* 12, 1849.

☞ We learn that a strange and fatal disease has appeared among horses in North Adams, Mass. Several have died. The symptoms are cramp, swelling, and difficulty of swallowing and breathing.

66—LONG-HORNED BULL.

Varieties of the Domestic Ox.

The Long-Horns.

The Long-Horns may be fairly considered as one of the original stocks of Britain and Ireland. More than two thousand years ago, when these countries were invaded by the Romans, the Long-Horns were found occupying the low and marshy sections of those islands, while the various middle-horned varieties were in possession of the hills and mountains.

The Long-Horns were much larger than the other aboriginal breeds of Britain* but were generally of coarse bone, thick and mellow hide, with drooping horns of great length,—those of the oxen being from two and a-half to three and a-half feet. The cows were noted for the extreme richness of their milk, which was yielded in moderate quantity. Though the general character of the breed was coarse, the animals had points and qualities which recommended them to favor: they were hardy, excellent for the dairy, and though arriving late to maturity, were very long-lived.

The district of Craven in Yorkshire and Lancashire, were the original strongholds of the long-horns in England. The great improver of the breed was BAKEWELL, who founded what was called the Dishley or new Leicester breed of long-horns, which was for many years the most popular breed in the world. Before Bakewell's day, some spirited attempts at improvement had been made with the breed. Sir THOMAS GRESLEY had long-horned stock which was highly prized; and about the year 1720 a blacksmith and small farmer by the name of WELBY procured some cows of this herd, which were taken to Linton in Derbyshire. Soon after this, Mr. WEBSTER, of Canley, procured some of the stock of Sir Thomas Gresley, and procured bulls from Lancashire and Westmoreland, and after several years, distinguished himself as a breeder. He established what was called the Canley breed, from which Mr. Bakewell, about 1760, purchased two long-horned heifers, and by crossing these with two long-horned bulls obtained from Westmoreland, he laid the foundation of his famous breed.

Mr. Bakewell's object was the production of beef at the least expense. Youatt observes—"Many years did not pass before his stock was unrivalled for the roundness of its form and smallness of its bone, and its aptitude to acquire external fat; while they were small consumers of food in proportion to their size; but at the same time, their qualities as milkers were very considerably lessened. The *grazier* could not too highly value the Dishley or new Leicester long-horn, but the *dairyman* and the *little farmer* clung to the old breed as most useful for their purpose."

Mr. Bakewell was ultimately most successful in the accomplishment of his object. He established a breed which for fattening purposes, were superior to any before known; and it is, indeed, doubtful whether, for this purpose they have ever been surpassed. This breed was bred many years by Mr. Bakewell and his associates and successors, and was of great service in crossing the common long-horns, not only in England, but in Ireland. Youatt says—"The Irish breeders owe everything to the new Leicester cattle. A new stock, in fact, has arisen since the improved long-horns were grafted on the native Irish stock."

The stock of Bakewell, and his successors, Fowler, Princep, Munday, and Honeybourne, frequently sold at very high prices. In 1791, bulls sold at auction at £230 to £250, and cows at £150 to £273; and Mr. Fowler refused 500 guineas for ten bull calves.

The long-horns are not as frequently to be met with pure, as formerly: and the variety introduced and cultivated by Bakewell, is thought to be nearly extinct. The pure long-horned stock is, however, still cherished and preserved by some breeders with great care, and excellent animals of this breed are brought out at the English shows.

Importations of long-horns, of Bakewell's variety, were made to this country by several individuals. They were taken to Kentucky by Mr. SANDERS, as mentioned by him in the March number of our current volume; cows of this stock were introduced into Massachusetts by GILBERT STEWART and WARD N. BOYLSTON; two bulls of this or some other family of long-horns were imported into Maine by Mr. VAUGHAN, in 1792; and the breed was introduced into New-York, by Mr. ADCOCK of Otsego county. There are probably but few full bloods at the present time in the country. Their success in crossing with the common stock, has been generally satisfactory. They generally improved the form, constitution and muscular energy of our stock, rendering it better for fattening and for labor, while the

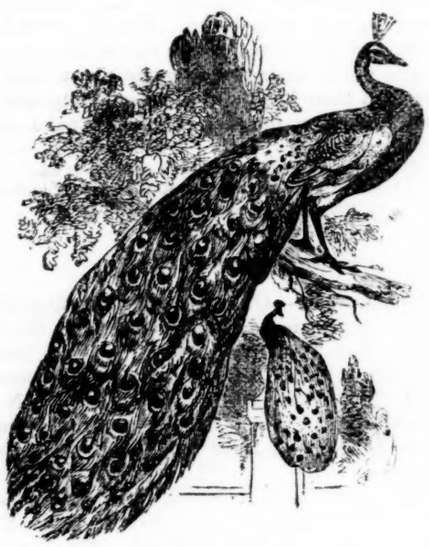
* The short-horns are not considered aboriginal having been introduced into England from the Continent.

cows were not inferior for the dairy. The celebrity which the working oxen of some districts of Maine have acquired for their great strength and power, had its foundation in the progeny of the long-horn bulls introduced by Mr. Vaughan. In Kentucky and other western states, it is admitted, that a dash of the long-horn blood is highly useful in giving to the cattle the essential faculty of traveling well. Mr. Sanders, in the article before referred to, mentions the value of the breed in imparting vigor and constitution to the short-horns.

The Poultry Yard.

The Pea Fowl.

This bird, the splendor of whose plumage has been celebrated from the earliest times, is a native of India, where it is still found in a wild state. There are two species; the common, and the Japanese. In size they are about equal; but the plumage of the Japanese species differs considerably from the other, the prevailing colors being green and blue, changing into each other



67.—THE PEA-FOWL.

according as they are exposed to the rays of light. There are, however, occasional variations of color in the common species, some being pied, and some entirely white. Mr. COLMAN, in his "Familiar Letters," mentions having seen one of the latter color in the aviary of the Duchess of Richmond. A definite idea of the brilliancy of the peacock's plumage, cannot be given by description, but the bird is generally well known. The feathers which give to the peacock its most striking character, are in popular language called the tail; though they are not the tail, but the tail-coverts. The proper tail is under these, and consists of short, stiff, rust colored feathers, which support the long "gem-starred plumes." The true tail-feathers are eighteen in number; the head is surmounted by a crest of twenty-four upright feathers. The female has the crest but not the other ornamental plumes of the male.

The pea-fowl is usually kept merely as an ornament, though its flesh is, in young birds, considered fully equal to that of the turkey. "In ancient times," says Martin —"no great feast in the baron's hall was served up without this bird to grace it—it was presented by the sewer, well cooked, on a large dish, but re-arrayed in its gorgeous plumage; and before the peacock and the ladies did the adventurous knight make his vow."

The pea-hen sometimes breeds the second season, and when she is only a year old, but not generally till two years old. She usually lays from five to ten eggs in a season, and the period of incubation is thirty days. The female should be concealed from the male while she is sitting, because, from a strange propensity, he will often break the eggs, and will sometimes kill the young when they first come out. Even the chicks of turkeys and common fowls are not always safe if allowed to roam in his accustomed walks. The cock does not acquire his full plumage till he is three years old.

The Farmer's Note-Book.

Highways.

The greatest improvement on roads introduced into this quarter, consists in *scraping them lengthwise* as soon as they become settled in spring, or at any other time after wet weather. It is a great labor-saving operation. One day's work with a heavy scraper is generally sufficient to put a whole road district in the finest condition,—filling up the *ruts*, breaking down the *hubs*, and rendering the entire surface as smooth as it ever is in summer.

In years past it was the practice,—and it continues to be so in many districts,—to let the roads alone, for it was found that they would gradually become smooth in dry weather by the battering of hoofs, and the grinding of wheels; and though a long time was required for the purpose, it was supposed to cost nothing; but it did cost the team many a hard strain, and the joints of the wagon or carriage many a hard wrench, before the task was completed. We have now some reason to believe however, that PUBLIC SPIRIT is on the increase among path-masters; and hope that if "two dry sticks will burn a green one," two good examples will not be without their proper influence.

About the middle of the 4th month, I observed that the road from Aurora to Poplar Ridge, had been rendered beautifully smooth; and on my way to Auburn, similar improvements cheered me through most of the distance, though more scantily as I approached that city, ceasing entirely a little before I entered its limits. In this, I was disappointed, for cities ought to be the head-quarters of Public Spirit.

There is another labor-saving operation which some worthy citizen in the olden time had caused to be incorporated with our Road Laws, viz: *To throw the loose stones out of the beaten track once a month.* This excellent provision, however, has long since been a dead letter. To the traveler who goes forth in his own conveyance, such neglect must be comfortless, especially if he has eyes to observe and faculties to think; and this will be increased where soft mud, or rich soil has been scraped in, inevitably to make mortar in a climate like ours. But our whole system of road laws, needs revision; and the office of overseer of highways ought to be utterly abolished. VIATOR.

Besides the defects in the management of roads mentioned by our esteemed correspondent, there are some others which we think ought to be remedied. In a late excursion, we had occasion to feel the want of *guide-boards*, in many instances. Not unfrequently, where the roads diverged, there was nothing to direct the traveler to his destined point, and he could only learn which way to go, by inquiring at the nearest house, sometimes half a mile out of his direct route. We had supposed there were laws in most parts of our country, requiring the erection and support of suitable guide-boards. If there are not such laws, they are certainly *needed* in some communities; and if such laws exist, they should be enforced. Another great defect is, leav-

ing roads rough and uneven, after they have been, as is in some cases falsely called, *repaired*. Loads of earth unspread, and large lumps of hard clay, are left on the traveled part of the road, where there is no way of avoiding them, rendering carriages liable to be broken, with all the care that can be used in driving. The hollows hold water, which softens the earth and the wheels work out the mud, leaving deep holes. Why not finish the road as far as begun,—or rather begin no more than can be finished,—leaving the rest without making it worse than it was before? Another defect,—which, however, we noticed in but few instances,—was plowing the sides and ridging the centre of roads on the tops *of hills and sharp knolls*. How much easier to have *improved* the road by scraping the tops of the knolls into the hollows! EDS.

Farm Improvements.

The improvement of the soil is one great object to be attained by the good farmer. All the fertilising substances within his reach will be devoted to this purpose, in order to increase the present quantity of his crops, and to insure a greater fertility of soil for the future. Annually removing the productions of the soil proves exhausting, and in time would render the soil barren, but science teaches us, that all the substances that make a soil fertile, can be restored, and its original richness be retained. It is then the duty of all that cultivate the earth, so to direct their labors that all the fertilising elements which they take from the earth, shall be returned to it again, that the soil be neither "barren nor unfruitful." That there are many who take an opposite course is not to be denied. The precept "keep what you have and get what you can," is as effectually obeyed in directing the labors of their farms, as in their traffic with their fellow men. And yet even such men will acknowledge the importance of improving the soil.

But though the improvement of the soil is reckoned of the first importance, the improvement of the farm in other respects, should certainly not be neglected. The judicious and enterprising farmer will see where improvements *should* be made, and he will see that they *are* made. It is not supposed that farmers as a class, have the means to make radical alterations in their buildings, or in the plan of their farms. They need not. A few hours' labor here, or a few dollars expended there, may make a greater improvement proportionally, than hundreds of dollars laid out in alterations. Look at those bars, which have to be let down or taken away, on an average, once or twice a day throughout the year, for the purpose of passing through. Just put a gate there, which can be done at a trifling expense, and there is an improvement from which benefit will be derived every day. A gate not only facilitates passing in and out, but it looks better. Their superiority needs no demonstration,—it is a "fixed fact." And yet there are thousands of farms scattered all over the land, that are entirely without any such *labor-saving* articles, and farmers are living as contentedly as if they could not be obtained.

Again; how often are we reminded of the observation of Solomon, "I went by the field of the slothful, and lo. it was all grown over with thorns, and nettles covered the face thereof, and the stone wall thereof was broken down," when a few hours' work would destroy the "thorns," eradicate the "nettles," and repair the "stone wall," while the satisfaction of contemplating the improvement, would amply compensate for the labor bestowed. I know the women and children are eloquent pleaders in behalf of the raspberry and blackberry bushes, but they had better be cultivated in the garden, than monopolize the corners and sides of fields appropriated to grass and grain.

Again; another method of improvment is by building substantial fences. These will differ in different localities according to the kind and cheapness of material. In New England, and especially in the Granite State, the majority of farms have the material for stone wall scattered all over their surface. This can be made available by digging and occasionally blasting, and when once laid into wall will last forever. This method, by removing the stones from the field, and by making a durable fence, has a double advantage. In building wall where the ground is soft, and indeed in all cases, it is better to dig a trench, say about eighteen inches wide, down to the subsoil, and fill nearly full with small stones, on which to lay the foundation; then the wall will not be thrown out of place by frost, nor settle into the ground. Stone wall is certainly expensive in comparison with some other fences, but its durability and security renders it cheaper in the end.

These are some of the methods in which farms may be improved. But the farmer, who in his system combines beauty with utility, will need no suggestions in regard to the improvement of his farm. When his crops do not reqnire his attention, he will find something to do, either in beautifying or benefiting his premises. Many acknowledge the necessity of improvements, but they never begin to make them. Bushes grow around their fields and meadows, rocks and stones encumber their tillage lands, their fences grow every year more unsightly, and their fruit trees remain unpruned and ungrafted; but they plead they "don't have time to remedy the evils."

"They know the right and they approve it too,
They know the wrong, but still the wrong pursue."

W. L. EATON. *East Weare.*

Imported Cattle.

EDS. CULTIVATOR—On my return from England last spring I brought with me, for account of Col. Sherwood, of Auburn, New-York, and myself, a short horn bull and three short horn heifers; and one short horn bull calf for J. F. Sheafe, Esq., of Dutches Co., N. Y.—Col. Sherwood and myself have had so many inquiries as to these cattle, that I ask a notice of them through your columns.

The bull is 3d DUKE of CAMBRIDGE; his portrait and pedigree may be seen in the 4th vol. of the English Herd Book, page ——, No. (5941). He was bred by that distinguished breeder, Thomas Bates, Esq., of Kirkleavington, Yarm, England, who is so widely and well known both in England and America.

The heifers and bull calf were bred by John Stephenson, Esq., of the county of Durham, England, well known as the possessor of the superior and famous PRINCESS TRIBE of short horns.

In the execution of the commissions of Mr. Sheafe and Col. Sherwood, I was left to my own discretion; they trusting to my judgment. I made a thorough examination of the various herds of short horns in England, and from among them selected such animals as I thought would meet the views of my associates, and at the same time satisfy the critical scrutiny of American breeders.

These cattle have now been in America five months, and have been seen by hundreds of persons, including many of our best judges and breeders. It gives me great pleasure to say they have met the approbation of all who have seen them. The universal testimony is that in every respect they are the best short horns ever imported into America.

The vessel on which they were imported, encountered weather of extraordinary severity, and the voyage was both long and tempestuous; indeed for twenty days there was a continued hurricane. In consequence of this, the cattle were reduced and worn out. They are

now all recovering, except one heifer; she was ill and was knocked all to pieces, and has not yet regained her form, and I fear may not. She was the best of the three heifers before sailing.

The origin of these animals is this. The late Sir Henry Vane Tempest, of Wynyard Park, county of Durham, England, possessed a herd of short horns widely known for its wonderful and unsurpassed excellence. They are designated in England the "WYNYARD HERD" or PRINCESS TRIBE. In 1800 Sir Henry purchased the original of his herd, the cow Princess, of Robert Colling. After the death of Sir Henry, the Wynyard herd was sold, and the cow Angelina (a grandaughter of Princess) became the property of Mr. Stephenson, of Wolviston, county of Durham. From Angelina the animals which I brought over are descended. I give the pedigree of one of the heifers in full, to show how rich is their breeding.

Princess 3d, got by Napier, (No. 6238 in the English Herd Book) dam Rose Ann, by Bellerophon, (No. 3119) grandam Rosette by Belvidere, (1706); great grandam Red Rose, by Waterloo, (2816); great great grandam Moss Rose by Baron, (58); gr. gr. gr. grandam Angelina (bred by Sir Henry Vane Tempest) by Phenomenon, (291); gr. gr. gr. gr. grandam Anna Boleyn, by Favorite (252); gr. gr. gr. gr. gr. grandam Princess, (bred by Robert Colling) by Favorite, (252); gr. gr. gr. gr. gr. gr. grandam Brighteyes by Favorite, (252); gr. gr. gr. gr. gr. gr. gr. grandam Brighteyes, (bred by Alexander Hall, and by him sold to Robert Colling) by Hubback, (319); gr. gr. gr. gr. gr. gr. gr. gr. grandam Brighteyes by Snowdon's bull, (612); gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam by Masterman's bull, (422); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam by Harrison's bull, (669); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam Tripes, (bred by Mr. Pickering of Sedgefield and by him sold to Mr. Hall) by the Studley bull, (627).

The pedigree of the Princess Tribe of short horns traces farther back than any one recorded in the Herd Book, and the *blood throughout* is of the *highest* character.

In the above pedigree the bulls Napier, Bellerophon, Belvidere and Waterloo, were all bred by Mr. Stephenson, and are all descended from Angelina. Baron is also of the same tribe, though not bred by Mr. Stephenson.

The bull 3d Duke of Cambridge was got by Duke of Northumberland (1940), dam Waterloo 2d; by Belvidere, grandam Waterloo 1st by Waterloo (2816), great grandam Lady Antrim, by Waterloo—Anna, by Launsleeves, (365)—Angelina by Phenomenon, (491), &c.

Duke of Northumberland, bred by Mr. Bates, was got by Belvidere, (1706); dam Duchess 34th, by Belvidere, (1706); grandam Duchess 29th, by second Hubback, (1423).

Mr. Bates bought Belvidere of Mr. Stephenson.

The other two heifers are bred as follows:

Princess 2d got by General Sale, (8099); dam Duchess by 4th Duke of Northumberland, (—); grandam Rosette by Belvidere, (1706), &c., as in pedigree of Princess 3d. Fourth Duke of Northumberland was brother of Duke of Northumberland.

Red Rose 3d, got by General Sale, (8099); Jane, Maid of Orleans by Marmaluke, (2258); grandam Helena by Waterloo, (2816); great grandam Moss Rose by Baron, (58), &c., as in pedigree of Princess 3d.

General Sale was got by Napier, and is a full brother of Princess 3d.

There are portraits of Napier and Princess 2d, at the rooms of the N. Y. State Agricultural Society, Albany. *Such* portraits of *such* animals are no where else to be seen in this country. I invite an inspection of them.

I have great pleasure in knowing that I have brought to this country so superior a bull from the herd of that eminent breeder, Mr. Bates. He is the only bull in America got by Mr. Bates' *crack prize* bull Duke of Northumberland, the best Mr. Bates ever bred; and Mr. Bates has but one more got by the same bull, now left; and Duke of Northumberland is dead. Persons desiring the blood of Mr. Bates' herd, can no where else in this country procure it *with such high characteristics of style, quality, symmetry* and *substance*. Mr. Bates repeatedly told me that 3d. Duke of Cambridge was more like his sire than any other bull ever got by him.

From the various expressions of approval received, I select the following. The writer, Lewis F. Allen, is well known as an extensive breeder of short horns, and as a judge. No person in the United States has had a more intimate knowledge of the short horns in our country for the last twenty-five years; he is the author of the American Herd Book. * * * "Since I saw him I have thought much on your bull 3d. Duke of Cambridge, and in comparing him in my mind with *all* the bulls I have ever seen, I am more and more impressed with his superior value to anything *yet* brought into the United States. In short he fills my mind *entirely* with *all* the qualities which a *perfect* short horn should possess; and I don't know but the heifers are *quite* his equals in style, quality, &c. I trust you will have all the success, both in increase and in the sale of their produce which you deserve; for our country has *never* before, within my knowledge, received such an acquisition in the stock line as in these cattle. You deserve much for your enterprise, and Mr. Stevens a great deal for his judgment and good taste in selecting such animals. They far exceed my anticipations, although, I am free to say, I anticipated much from Stevens's selections, with all England for a field to choose in."

This opinion was unsolicited on the part of Col. Sherwood or myself, and wholly voluntary on the part of Mr. Allen.

Steps have been taken to have a portrait of 3d. Duke of Cambridge engraved for publication in *The Cultivator* for September or October; and of Princess 2d. in some future number.

These animals are now at Col. Sherwood's, Auburn, New-York, where they may be seen. It is now designed to show them at Syracuse, at the great cattle show of the State Society in September. Col. Sherwood and myself invite the attention of breeders and amateurs to them. AMBROSE STEVENS. *New-York.*

Litigation.

EDS. CULTIVATOR—Whoever shall write a fair history of our State, must set it down as one of the evils of the time, that we are a litigious people, too fond of law suits; and that we support and sustain too many lawyers.

The farmers being a majority; and their property being mainly in lands that can be readily reached by the taxing officers, pay a larger share of the expenses of government in proportion to their means, than those engaged in other pursuits. If they are in debt for their lands, still they are taxed for them, without any allowance for their indebtedness. This might and ought to be remedied by an amendment of the assessment and taxing laws. Still, this would not reach the evil of a too expensive judiciary system. This must be done, if at all, by lessening the amount of litigation. Let the cause be removed, and the effect will cease, as a matter of course. It seems to me that public opinion needs a change on this subject; and if effected, it must commence by individual exertion. Let each farmer use his influence to effect a reform, and they will succeed. In

many of the causes tried at our county courts, the costs exceed the damages; and the parties are the worse off, both in a moral and pecuniary point of view. Jurors and witnesses are called from their business, and the people taxed to pay judges, jurors, &c. Suits are frequently determined by some technicality of the law, and not by strict justice. The parties often resort to intrigue and management to gain their suit, which they would not otherwise do. But few men if any, who are frequently engaged in lawsuits, sustain a good moral character. A civil suit, commenced in the first instance, in a justices' court, for a trifling amount, often gets a whole neighborhood by the ears; and is the cause of divers slander suits, indictments for assault and battery, perjury, &c. Thus they are harrassed by being called to the county seats as witnesses; many of them take sides with one or the other of the parties. Bitter and unkind feelings are engendered, and a looseness of moral principle, prejudicial to good morals, and good society is the natural consequence.

If, in traveling, you pass a huddle of houses in a dilapidated condition, and where almost everything in the vicinity bears marks of sloth and negligence, you may set it down as morally certain, that justices' courts are frequent, and the people are given to litigation; and that the only persons, if any, who make money, are the rumseller, the pettifogger, justice and constable.

How then are these evils, (and all must admit them as such,) to be remedied? Let every farmer make up his mind not to have a lawsuit, *unless it is absolutely necessary*. Let him as a general thing, sell his produce for ready pay; pay down for what he buys, deal honorably and uprightly, adopt the rule of "doing as he would wish to be done by," and he will seldom be in a situation in which a suit will be necessary. We can find many farmers, sixty or seventy years of age, who never had a suit in their lives, and the writer of this is one of the number.

Let the most influential farmers take this course, and advise all others to do the same. Let all those who are fond of lawsuits and quarrels, know that they lose character and standing by them; and it is believed that agricultural districts would be much improved, both in a moral, pecuniary and social point of view. The farmers are from their peaceful and retired situation; from their independence and occupation, exactly in a right situation to commence and carry out a reform of this nature, and would themselves be the greatest gainers by it.

When I see a young farmer fond of attending lawsuits; often taking sides with one or the other of the parties, frequently a witness; studying the nice technicalities of the law, and trying to get elected a justice or constable, I cannot but think he had better be learning and practicing the art of good farming; and spending his leisure time, reading some good works on agriculture, moral philosophy, and political economy. FARMER.

Yield of Crops in Ohio.

We have compiled the following table from the returns of the several counties in the state of Ohio, published in the Report of the State Board of Agriculture. They purport to give the average yield per acre, for 1848. Wheat is generally stated to have been considerably above an average—other crops about an average, compared with other seasons. Potatoes are said to have been injured by the "disease" in most instances, and in several counties, where the yield is not given it is mentioned as a failure—not more than five to twenty bushels of sound tubers per acre having been obtained. Some other crops are noticed in the returns—such as buckwheat, and, in a few instances, tobacco. The yield of the former ranges from twelve to thirty-seven bushels per acre; and that of the latter from 600 to 2000 pounds per acre.

COUNTIES.	Hay. Tons.	Potatoes. Bushels.	Wheat. Bushels.	Rye. Bush	Barley. Bushels.	Oats. Bushels.	Ind Corn. Bushels.
Adams,			12	....	....	106	30
Athens,	1½	100	15	....	....	25	40
Ashtatula,	1½	150	15	....	....	40	45
Ashland,	1½	40	10	15	15	30	50
Champaigne,	¾	75	16	....	....	30	46
Carroll,	2½	50	15	20	35	38	45
Clinton,	1½	40	20	....	....	35	45
Columbiana,	2	....	17	....	35	50	35
Clark,	1½	100	18	15	....	40	40
Cuyahoga,	1½	....	10	12	....	40	35
Crawford,	2	....	20	....	35	33	40
Clermont,	1	50	15	10	12	12	45
Coshocton,	....	....	12	....	....	25	40
Erie,	2	25	15	....	32	35	35
Franklin,	2	75	18	25	20	40	50
Delaware,	2	....	18	....	20	30	45
Darke,	2	70	20	25	20	35	50
Defiance,	2	150	20	25	20	45	45
Fayette,	1½	30	12	12	....	25	38
Greene,	1½	100	17	20	40†	30	50
Gallia,	1½	50	12	....	....	20	35
Granger,	1½	....	10	10	12	40	35
Guernsey,	1½	80	14	....	25	40	40
Highland,	....	....	12	12	12	15	50
Henry,	1½	50	18	....	....	45	45
Hocking,	2	100	12	....	....	25	35
Hardin,	2	....	17½	14	30	33	35
Hamilton, (averages not given)							
Hancock,	2	50	20	25	....	40	40
Huron, (averages not given.)							
Harrison,	1½	....	15	....	....	35	40
Jefferson,	1½	....	15	15	40	35	40
Lake,	2	50	12	15	35	50	45
Licking,	2	100	18	15	25	30	50
Lawrence,	1	50	10	....	....	20	30
Lorain,	1½	50	13	....	....	40	30
Mahoning,	1½	40	6	....	30	40	40
Medina,	1½	....	10	....	30	40	35
Monroe,	1½	....	12	....	....	25	35
Meigs,	1½	60	15	15	20	35	40
Muskingum,	....	....	16½	....	....	40	45
Miami,	1½	....	25	....	....	35	65
Montgomery,	1½	100	18	15	25	30	45
Morgan,	1½	....	20	....	....	30	35
Mercer,	2	100	15	10	18	20	25
Madison,	1½	50	15	20	20	30	40
Ottawa,	1¾	....	17	....	..	30	25
Paulding,	2	100	20	....	....	40	50
Putnam,	3	150	18	25	....	25	50
Preble,*	1	50	16	....	....	15	20
Portage,	1½	50	9	8	20	35	40
Perry,	1	....	20	18	....	50	40
Pickaway,	1½	....	15	14	....	20	46
Richland,	2	....	15	15	....	40	35
Ross,	1½	....	13	....	....	22	45
Seneca,	1	....	15	....	15	40	40
Summit,	1½	....	9	12	15	35	40
Shelby,	2	....	22	15	40	40	25
Stark,	2	50	15	20	30	....	50
Trumbull,	1½	60	10	17	20	30	40
Tuscarawas,	2	80	17	16	23	30	40
Union	1½	80	15	....	....	35	35
Van Wert,	1½	150	20	20	....	30	33
Washington,	1½	100	10	15	....	25	45
Warren,	1½	100	15	12	2›	25	50
Wayne,	2	....	18	20	....	45	35
Wood,	1½	20	10	18	18	34	34
Wyandot,	2	30	15	....	....	35	42

* In this instance the yield is put down at 40 bushels per acre for "fall barley," and 20 for "spring barley."

† All the crops in this county, except wheat, greatly injured by drouth.

Agricultural Reading.

Agricultural pursuits, I deem second in importance to none other. It has ever been my delight to see a spirit of improvement enlisting the minds of many of our most successful farmers, and by observing some of their most skillful management, it has been a source of pleasure to glean ideas and profit by them, whenever the opportunity offered. I shall ever feel that I owe a debt of gratitude to the founder of the first agricultural paper that I became familiarly acquainted with—*The Cultivator*. It enlisted a spirit of observation and improvement—a spirit of *go-aheadativeness*,—to advance

beyond where our fore-fathers stopped. *The Cultivator* at its commencement, had a high and aspiring motto—"To Improve the Soil and the Mind"—and I believe it has faithfully adhered to this principle up to the present time.

The agricultural community generally, is not divided (in respect to their employment) into sects and parties; but is engaged in common, in raising the products of the soil. I hope to see such a spirit of liberality that each one will feel free to exert their energies to ameliorate and improve the condition of mankind generally. At the present day, the odium is somewhat dispelled that used to deter many from engaging in agriculture; it engages the attention of some of the first men of the age; and is acknowledged to be not only an honorable, but a profitable occupation. RUSTICUS. *Quaker Springs, N. Y., June* 12, 1849.

Agriculture of California.

EDS. CULTIVATOR—The following extracts are from a letter received by me from my brother-in-law, Joseph Aram, who removed to California with his family, in 1846. The portion of the letter which relates to the agricultural resources of that country, I thought might not be uninteresting to many of the readers of *The Cultivator*. The letter is dated Pueblo de San Jose, Upper California, *March* 9, 1849. DANIEL H. WRIGHT. *Castile, Wyoming county, N. Y.*

"Can crops be raised in California without irrigation?"

Wheat, barley, corn, and oats need no irrigation, they do well on the prairies; but vegetables need water, though on low damp ground, they do well.

"What do grains yield per acre?"

Wheat from 25 to 75 bushels per acre; barley the same, corn from 15 to 20 bushels; oats grow spontaneously over a great portion of the country;—I have frequently seen those that would yield from 60 to 70 bushels per acre. All kinds of grain are scarce and dear.

Plowing for wheat commences in December, and we sow from that time till the first of March. Farming has been neglected on account of the mines. Wheat is worth $2 a bushel, corn $3.50, barley $5.00, potatoes $4.50, butter per pound, $1, eggs per dozen $1, horses each, $50 to $200, mules $100 to $300. American oxen, a yoke, $200, California oxen, $100, beef cattle, each, $8 to $12, wagons $200 to $1000. The scarcity makes the price. There is nothing cheap but beef cattle.

Lumber is worth $75 per thousand feet, very scarce at that; it has sold for more. Nails 10 cents per lb., by the keg.

Monterey has about 5,000 inhabitants, Puebla, 2,000, San Francisco, 5,000.

Forty-six vessels came into the port of Monterey, and eighty-four into San Francisco, during the past year, but no whalers,—they are afraid to come in, for their hands would run away to the mines. The extent of the bay of Monterey is considerable—it is 15 miles across its mouth;—the harbor is a narrow neck running into the main land; it is properly an arm of the sea. San Francisco has taken the lead the past year, being better situated for the mines.

The Spaniards depend on selling horses and cattle for their subsistence. The Americans get their living by *skinning* the Spaniards, and many have grown rich at that. The latter are very indolent, and much given to gambling.

We have a variety of fruit,—pears, the best that I ever saw; apples rather poor quality—need grafting; peaches, very good; quinces, most excellent; grapes are good; apricots, nectarines and figs, but not good.

The changes of the seasons are as follows: The rains commence about the first of December, and we have occasional showers from that time until the month of March; the balance of the year has no rain. But vegetation does not suffer as much as you might imagine; the soil seems adapted to the climate.

The Spaniards build altogether with *dobies* or unburnt bricks; most of the Americans build frame houses. But those dobies make a most excellent house.

Grain is always threshed immediately after it is cut—trod out by horses.

There is some very good water, and considerable very bad—the springs are good, but many of the wells are poor.

Bilious diseases are the most common.

The face of the country is mountainous with valleys between. For agricultural purposes, the valleys are generally good, the hills and mountains are only valuable for grazing.

The people transport their produce in carts drawn by oxen, from the interior to the towns on the coast.

"What is land worth?"

The price of land is rising fast. I have a piece of land containing between three and four hundred acres, for which I paid, two years since, $200, now it would bring $4,000. Lots in Monterey are worth from $100 to $2,000, without buildings.

Wagon timber is scarce near the coast, but in the vicinity of the mines, there is an abundance.

We have plenty of saw mills, but they are standing idle, those that tended them having gone to the mines.

The forest trees are, oak, pine, red-wood, madrone, cedar, live-oak, white and red fir. The timber is confined to the hills;—the plains are generally open. I have seen abundance of red-wood timber three hundred feet high, and from 12 to 15 feet in diameter at the base.

The streams overflow in June and July, when the snow melts on the high mountains. The rains during winter raise the streams, but not to overflow.

It is about 200 miles from the coast to where the gold is found; the gold mines run north and south, parallel with the coast.

We have plenty of fish, but few fishermen. Also, deer, elk, antelope, grizly bear, and wild horses and cattle. But no one stops to hunt now—except the Spaniards, who go out now and then to catch wild horses, which are becoming so valuable that it is quite an object to catch them. Cattle and hogs are as fine here as I ever saw. Our Spanish cows cannot be beat by your Durhams, only they will kick.

This would be a fine country for bees, if they could be got here; but it is somewhat singular, there are none to be found.

Weather in Virginia.

EDS. CULTIVATOR.—I see in the Cultivator for June, 1849, page 178, a piece headed the weather, and as I keep a sort of diary, I concluded to send you an account of the weather with dates. I live thirty miles west of Norfolk. Nov. 3, '48, frost and ice; 5, rain; 6, fair and cold; 8, frost, cold and fair; 9, ice; 12, rain; 16, fair and pleasant; 18, rain and very chilly; 19, snowed; 20, ice; 21, ice; 25, warm; 20, frost and ice. Dec. 2, rain; 12 to 16, rain; 19, very warm; 28 to 31, ice. Jan. 1, cold; 3, freezing of nights to 7; 9, snowed; 11, very cold; 21, rain; 24, cold and fair. Feby. 1, rain; 6, fair and very cold; 8, freezing; 13, fair and cold; 15, snowed six inches deep; 18, snowed; 22, snowed; 24, fair and pleasant; 26, storm, wind and rain; 28, storm continues. March 1, rain and very chilly; 11, delightful; 20, cloudy; 31, fair and pleasant. April 1, cloudy and chilly; 5, clouds and sun; 10, fair and warm; 12, fair and windy; 14, fair, cold and blustery; 15, ice ¼ inch thick and very cold; 16, ice; 17, fair and cold—

and this cold spell killed all the young vegetables in the gardens, (pease cut down, &c.,) and all stone fruits of every sort—19, fair and extremely cold; 20, fair, and not so cold—to the end of the month much more moderate. May came in quite pleasant, &c. &c. J. BUNCH. *Chuckatuck, June, 20, 1849.*

The Cost of Fine Wool.

EDS. CULTIVATOR.—It is impossible to give your correspondents, who inquire the cost of a pound of fine wool, a definite answer. The best answer may be found in a statement of facts and estimates by those, in different parts of the land, who have experience in the wool business. Like Polydamas, I was pleased with the exact statistics and sensible estimates of Mr. Pettibone. To the same end I send you a few statements, in regard to the business here. And what I say shall answer for about half a dozen farms in this immediate neighborhood, which is in a valley called the Oblong, quite in the eastern part of Dutchess county. We follow a mixed husbandry, as the soil is about equally adapted to grain and grass, and yields a better return than by any single branch of farming. The value of improved lands, in good sized farms, is about fifty dollars per acre. The number of sheep kept on a farm of two hundred acres is four hundred, besides a team of four oxen, two or three horses, four cows, and a few young cattle. There are usually about forty acres under the plow, and one hundred and sixty in meadow and pasture. What proportion of the farm is devoted to the sheep cannot be defined, probably not less than 120 acres. The quantity of wool produced on an average of these flocks is two pounds and three-quarters per fleece; and the average price per pound, for the last six years, has been forty-seven cents. The surplus sheep sold each year from a flock of 400 are not less than 100, at the price of a dollar and a quarter per head. This amounts to six hundred and forty-two dollars.

The cost of keeping sheep includes a part of the general expenses of the farm, besides the interest on the price of the land, as fencing, taxes, seed, plaster, manure, &c. Henry Swift, of Poughkeepsie, was accustomed to pay to a tenant on one of these farms, some years ago, two hundred dollars a year, for the labor given to four hundred sheep, which included the securing of the hay, winter care, washing and shearing, and all other labor devoted to them.

Now, as to the profits of the business of growing fine wool, it is plain that it does not yield a large per cent, though like other branches of farming, when *well done*, it brings a fair return. We quite agree with Mr. Pettibone, that it makes all the difference in the world, whether a thing is done right. There is a general impression among our farmers, that their business does not yield them five per cent. on the capital invested; but I believe it can be demonstrated, that with skilful and prudent management, the farm yields at least six per cent., if the valuation of the land be not too extravagant.

On good land, easily cultivated, the raising of grain is twice as profitable as any branch of grazing. But as there must be manure, to keep up the fertility of the soil, it is necessary that a portion of the farm be devoted to stock. Therefore what seems to be a deficiency in the profits of the grass crop, is made up in the increased production of grain, and thus in a mixed husbandry, the acre of grass is truly as profitable as an acre of wheat.

We prefer fine wooled sheep to other stock, for several reasons; and the first is that on our dry arable lands it is more profitable than making beef, and brings much less care and labor than the dairy. We estimate that it requires as much hay and pasture for eight cows or steers, as for one hundred sheep. Sheep will do as well on straw and other coarse feed, as any stock will, and on poor or dry pasture sheep will do well, while cows or fatting cattle would not do at all. The quantity of hay to one hundred sheep through the winter does not exceed fifteen tons. It is our opinion also that on land suitable for wheat and corn, the manure of sheep is better than the manure of cattle, and on certain cold grass lands as a top dressing. I might add that there is less fluctuation in the wool market, than in that of beef and the products of the dairy, constituting a more stable and uniform business. And there is less trouble of buying and selling, after the flock is once established.

Some good farmers enjoy a greater profit than that I have stated, but many, for want of proper care, miss not only the profits, but also all the pleasures of their profession. I ought to add, that in some of the middle towns of Dutchess, on their fine grazing lands, they have given up fine wooled sheep for cattle; but we still think that this business, in connection with the whole system of farming, should not be hastily exchanged for any other. NEWTON REED. *Amenia Union, July, 1849.*

Wire Fences.

EDS. CULTIVATOR—A writer who signs himself S. W., in your July number, desires information on the subject of making wire fences. I will give what information I am able, and from my own experience. I have made, during the spring of 1848, about 1000 feet of wire fence on my premises; about 700 feet of which I put up in the following manner:

The posts were of white oak and butternut, and as it was undertaken mainly as an experiment, and as I intended eventually to plant some kind of hedge on the line, I paid but little regard either to size or beauty of the posts. They were set ten feet apart, and in depth about two feet, excepting at each end, one of larger size was set about four feet deep, imbeded firmly in stones, with a brace to each post, running from the top to near the bottom of the next. Four holes in each post were bored with a brace and bit from eight to nine inches apart. Wire of No. 9, was run through the whole length, and fastened at one end; and I adopted the following simple and easy method of straining them at the other end. I took a wrench which I use for turning the nuts on may wagon axles, and fitted it on one end of a stick of hard wood one or two feet long—the remainder of the stick being nearly round, and one or one and a half inch in diameter. Through that end of the stick, a hole was bored to admit the wire after it had passed through the end post. I then turned the stick with the wrench, until the wire obtained a sufficient tension—and, by the way, a great power can be obtained by such a purchase. The stick was then nailed to the post, and sawed off, and the same process performed with the remaining wires until all of the stick which was necessary was used up.

Another fence near my house was built with rather more regard to fancy. The posts were small, of uniform size and set nearer together, and the wires run through, forming lattice or diamond work, by passing alternately from the first to the second hole, and so on down. In this fence seven wires of smaller size, (No. 11) were used, with the addition of a board at the base. Upon all of the wire I put a thick composition of tar, oil and lead, which has proved an effectual protection from rust.

I can now say that these fences have proved good, beyond my expectations. I can say to your inquiring correspondent, that I did not loosen the wires, and the posts were not affected in the least by the severe frost of last winter. The cost of the wire for the fence first mentioned, was less than thirty cents per rod, and as to the value of the posts, the account can easily be adjust-

ed with the *wood pile*. Should S. W. obtain no other reply to his questions, I would also state that in my opinion, posts at the distance of twenty feet apart would make a sufficient fence for sheep, provided a wire of small size were placed midway between the posts, and twisted around each horizontal one from top to bottom. This would answer nearly as well as an additional post. It is desirable to coat the wire with the composition I have mentioned or with coal tar, as it is liable to rust, particularly if it passes throught chesnut posts, as that kind of timber. although durable, contains an acid extremely corroding. The holes should be half an inch, at least, in diameter, so as to admit a small brush. In case a post should decay, the wires can easily be sawed out, and new ones replaced. Staples No. 7 or 9, would probably answer well instead of holes through the posts. The whole fence can be painted any color desired.—Where trees have been set out on a line, wire can be attached with obvious ease and advantage. In the valley of the Connecticut, where I reside, several of our farmers have, within a few months, built wire fences in their meadows, which are annually overflowed by the river, and which will doubtless answer every good purpose intended. The great increase of rail roads, of manufacturing establishments, and the making of bricks, have materially raised the price of wood and timber in this State; consequently, fencing is quite an item in the expense of a farm. It is my opinion, that in a few years wire will be a common, if not the chief material for fences, at least in this vicinity. R. H. PHELPS. *Windsor, Ct., July* 16, 1849.

The $100 Premium on Sheep.

A purse of $100 having been offered for the best 25 Merino ewes and the best 25 Merino lambs, under one year old, to be exhibited at the next fair of the New-York State Agricultural Society, I propose to be a competitor in that exhibition, against any and all flocks that may be brought out. I state this, not as a challenge, but simply as a proposition, which may call together my brother farmers from different parts of the country. My object is to convince myself where the best Merino sheep are. If I have not obtained them, I must get them; for I am resolved to improve from the best, whatever may be the cost. By a fair competition we may compare the best specimens from the best flocks, and by that means may learn where the best sheep are to be found. For a series of years, I have spared no pains or expense to possess myself of the best Merino sheep that could be found, either in this country or the old world. It remains to be seen whether these efforts have been successful; and to this end I earnestly invite the growers of Merino wool throughout the Union, to meet me on the show-grounds at Syracuse next September, in honorable competition, and thus add another interesting feature to the somewhat national exhibition which will be made at the New-York State Fair. A. L. BINGHAM. *Cornwall, Vt., July* 16, 1849.

What constitutes a Thorough-bred Horse?

In the first place, it may be observed, that there has been a great deal of discussion in various publications, on sporting, but to very little purpose, on the much agitated question, "What constitutes a full blood, or what is termed a thorough-bred horse?" The question is very easily decided; the term "thorough-bred horse," merely implying one that can be traced through the Stud-Book, by sire and dam, to any Eastern stallion, or to what were called the Royal Mares, imported by Charles the Second, as they, together with two or three of the first imported stallions formed the *ne plus ultra* of all racing pedigrees. As to the assertion, that, for a horse to claim the title of thorough-bred, it is necessary that he should be of pure Oriental descent, it cannot for a moment be supported; as, independently of the fact that only two mares are stated in the Stud Book, or elsewhere, on authority, to have been imported into England in the early days of racing, it is well known that the first British race-horses were those of British breed, changed, ameliorated, and at last perfected by the admixture of eastern blood, and judicious crossing afterwards. *English Essay.*

Disease among Horses.

A farmer from Tioga county writes that there is a complaint lingering about the horses in some parts of the county, which is called the *Quinzy*, which is very much dreaded. It appeared first in June, 1848. The symptoms are—general stupidity of the animal, and a swelling under the throat at the butt of the jaws. The food comes out of the animal's nose, and occasionally, also, their drink. Several valuable animals have died.

Will the editors inform us as to this disease, and the best remedies for it, and whether it is the same disease so fatal to horses on Long Island, in 1846? J.

We should be pleased to have the suggestions of our veterinarians on this subject. EDS.

Mushrooms.

A great number of *fungi* of a poisonous nature, bear a near resemblance to the mild eatable mushroom, so that even the best judges of them are liable to occasional deception. The following description of of the true mushroom may be useful to those who intend to gather or to purchase this vegetable. The *gills* or under part of the cap are loose, of a *pinkey-red*, changing to a liver-color, situated close to the stem, but not united to it; very thick set, irregularly disposed, some forked next the stem, some next the edge of the cap, and some at both ends, in which case the intermediate smaller gills are generally excluded. The *cap* or pileus is externally white, changing to brown when old, and becoming scurfy; it is regularly convex, fleshy, flatter when old, from two to four inches, but sometimes even nine inches in diameter; it liquifies as it decays; the flesh is white. The *stem* is solid, white, cylindrical, from two to three inches high, half an inch in diameter. The *curtain* or membrane which extends from the stem to the edge of the cap, is white and delicate. When the mushroom first makes its appearance, it is smooth and almost globular, and in this state it is called a button. This species is esteemed the best and most savoury, and is much in request for the table. It is eaten fresh, either stewed or broiled, or preserved as a pickle, or in powder: it also furnishes the sauce called ketchup. The field plants are better for eating than those raised in artificial beds, their flesh being more tender; but the cultivated mushrooms are better looking, may be more easily collected in the proper state for eating, and are firmer and better for pickling. The wild mushrooms are found in parks and other pastures where the turf has not been plowed up for many years. The best time for gathering them is in August and September.

Those who are accustomed to mushrooms can distinguish the true from the false *by the smell*. The following test will be found useful to other persons: Sprinkle salt on the spongy part or gills of the mushrooms to be tried. If they turn yellow, they are poisonous; if they turn black, they are good. Allow the salt to act a little time before you decide as to the color.

Characters of false Mushrooms or Poisonous Fungi. They have a warty cap, or else fragments of membrane adhering to the upper surface; they are heavy, they emerge from a *vulva* or bag; they grow in woods and shady places, or in tufts or clusters on the trunks or

stumps of trees; they have an astringent styptic taste and a pungent and often nauseous odor; they become blue after being cut; they are moist on the surface; they possess an orange or rose-red color, they turn yellow when salted. Mushrooms which possess any of these properties, are to be shunned as dangerous.—*Canadian Agriculturist.*

The Wheat Midge.—*Cecidomyia tritici.*

This insect, whose appearance in this country was first noticed about thirty years ago, has been gradually spreading westward. For several years, while it was committing great injury in some of the New England States, and in Lower Canada, it was not seen in the Mohawk valley. The period of its appearance in Western New York is still more recent. No farther west than Syracuse, no particular complaint was heard in regard to it, till 1846, when the wheat crop was reported to have been so much damaged by it, that the culture of that grain was considerably lessened in consequence, the succeeding season. The present season we hear of its ravages in the Genesee valley, and in the state of Ohio. It has doubtless prevailed more or less in those sections for several years, but not in such numbers as to attract notice from the damage it occasioned. In 1843, the writer of this article discovered a few specimens of this insect in the interior of Ohio. The present season the wheat crop in some sections of that state has been seriously affected by it. The *Ohio Cultivator* says—"Some entire fields, which promised well at the time of blossoming, are wholly destroyed by this new devastator." The same insect is said to have attacked the oat crop also, which, in some instances, has been much injured by it.

The great inquiry, of course is, for some defence against so formidable an enemy. Where the insect has formerly prevailed, various means have been used to ward off its attacks. As regards spring wheat, we believe the most successful expedient has been *late sowing*. If sowed the last of May or first of June, the crop would not come into bloom till the insect had gone, or ceased to do damage. An opposite expedient was found best for winter wheat. It was observed that the earliest was least injured by the insect; and this suggested the idea of sowing early varieties, early in the season, where winter wheat was cultivated. Hence the *Mediterranean*, an early variety of winter wheat, was found to escape in a great degree, when later kinds were destroyed. It was beyond the state to be injured by the midge, at the time of its attack.

This kind of wheat was first introduced here on account of its properties in resisting the attacks of the Hessian fly—*Cecidomyia destructor;* but its comparative exemption from injury by this insect, was from a quality quite different from that by which it escaped the midge; it was thought to be owing to the leaf or sheath adhering so closely and firmly to the stalk, that the worms, which are hatched in the furrows of the leaf, were unable to obtain a lodgement within the sheath—the latter being the natural situation for its principal growth and perfection. For several years after the introduction of this variety, it seemed to be almost proof against the Hessian fly; but latterly, as we are told, it appears to have lost, in becoming acclimated, more or less of the peculiar property for which it was at first so highly valued.

The *Black-sea* wheat is a spring variety, which has been cultivated with advantage in sections where the midge has prevailed. The reason of its success is, that it bears late sowing better, with less liability to *rust*, than other varieties.

Thus it is seen that it is on account of *opposite* qualities that certain kinds of winter wheat and spring wheat escape the midge, and that these qualities are still different from the quality which exempts one variety from injury by the Hessian fly.

We would suggest the importance of attention to the proper names of insects. Confounding several species under the same name, is a common error. For instance, the wheat midge is spoken of as "the fly"—a term which, by common consent, has been almost universally given to the Hessian fly—a different species from the midge, and very different in its habits and manner of attacking the wheat crop. In other instances the midge is called "the weevil," "wheat worm," &c.—names which have been given to very different insects. A little study of the important science of entomology, would prevent this confusion, and enable all to converse or correspond understandingly in regard to different insects, and the best modes of preventing their ravages.

There are various parasitical insects which attack and destroy the Hessian fly and the wheat midge. The most important in regard to the former, is a fly call *Ceraphron destructor*. We do not know that this insect has ever been known to attack the wheat midge. A writer in a late number of the *North British Agriculturist*, speaks of a *beetle* which he had found within the glumes of wheat, stinging the larvæ of the midge.—He supposes the beetle to have been the *Ceraphron destructor*, which must be a mistake, as that insect is described by entomologists as a *four-winged fly*.

But the parasites of the wheat midge, are probably but imperfectly known in this country. Dr. Fitch, in his essay, published in the N. Y. State Society's *Transactions* for 1845, observes that four or more species are known abroad, which destroy the worm or larvæ of the midge.

Dr. F. states that one of the most effective destroyers of this insect, in this country, is the common *yellow bird*. He observes:

"Fields much infested by the insect, have been for many years recognized even by passers on the highway contiguous to them, by the rough and ragged aspect of the heads of the grain. I am not aware that the cause of this peculiar appearance has ever been stated in any of the communications that have appeared in our agricultural papers. It results from the operations of this bird. Alighting, it adroitly grasps the wheat stalk just below the ear, and clinging fearlessly to it, even when swayed to and fro by the wind, it with its bill parts down the chaff from the grain, and one after another of the worms to which it thus gains access are rapidly picked off and devoured. Thus several heads are generally freed from the worms, ere its repast is completed. That it is the worms and not the grain that it is in pursuit of, is readily ascertained by an inspection of the heads after the bird has left them: many of the kernels, not being sufficiently loosened to drop to the ground by the operation, will be found remaining, the maggots that were upon them only having been removed; whilst those kernels of the head which are not infested by the worm, are passed over untouched. It is curious that this little creature, by a tap with its horny bill, or some other process, is enabled to distinguish those scales of chaff which conceal so minute a worm, from those which do not; a knowledge which we only arrive at when we have parted down the chaff. A flock, numbering about fifty, embracing both male and female birds, appeared to make the field which I examined on the 16th of June their constant resort, for a period of three weeks or more, where they could be seen busily occupied almost constantly every day. The number of worms consumed by them during this time must have been immense; and I cannot but believe that this lovely bird will henceforward be esteemed for its utility, as much as it has heretofore been for its beauty."

Many artificial modes of destroying this insect have been suggested, and more or less tried, most of which

have proved failures. Slaked lime has been recommended to be sown on the heads of the wheat, while it is in blossom; but some careful experiments, instituted at the request of Dr. FITCH, showed that the lime had no effect whatever in preventiug the fly from depositing its eggs within the chaff. Dr. F. however, suggests a mode which appears much more feasible. He says:—

"A method is sometimes resorted to abroad, for saving grain fields from the depredations of certain insects of peculiar habits. A rope is drawn along over the grain by two men walking at a brisk pace; which rope thus knocking against the heads of the grain, causes the depredators to drop themselves instantly on the ground, and it is a slow and tedious task for them to get up to the heads of the grain again. A similar process, but with a different apparatus, I contemplate employing against the wheat-midge. This apparatus is a light net made of gauze, three or four feet deep and one or two rods long; its mouth reaching the entire length of the net, and opening to a width of about eighteen inches. A small rope is to be stitched to the upper and another to the lower side of the mouth, reaching slightly beyond the net at each end, which is to be carried by two persons holding the ends of these ropes. If on closely examining the wheat-fields of my vicinity, from the time that the heads begin to protrude from their sheaths, the fly is found to be gathering in swarms in any one of them, I intend repairing to that field in the evening, when the insects will be hovering in such myriads about the heads of the grain, and, with an assistant, carrying the net so that the lower cord will strike a few inches below the heads of grain, the upper one being held nearly a foot in advance of it, and about the same distance above the tops of the heads; by keeping the cords tense and walking at a uniformly rapid pace from side to side of the field, until the whole is swept over, I shall be much disappointed if *countless millions* are not gathered into the net, which is to be instantly closed whenever a pause is made, by bringing the cords together. It is now to be folded or rolled together into a smaller compass, and then pressed by the hands or otherwise so as to crush the vermin contained within it. This measure has been suggested to me, by observing the perfect facility with which the small entomological fly-net becomes *filled* with these flies, on sweeping it to and fro a few times among the heads of infested wheat in the evening. Of course this operation should be resorted to on the first appearance of the fly in numbers, and before its eggs have been deposited so profusely as will occur in the course of a few days. I feel strongly confident, that by sweeping over a field a very few times in the manner above described, the fly may be so completely thinned out and destroyed, as to be incapable of injuring the crop perceptibly."

Cement for Floors

EDS. CULTIVATOR—I have a question to ask about cement for a floor to stand frost. Somewhere in the *The Cultivator*, it is said that sand and coal ashes mixed with coal tar, make a good floor for a yard. Now, the thought came into my head, that hydraulic cement and sand in the same proportions as when used for plastering a cistern, mixed with coal tar, would make a good floor for a piazza. As a certain portion of water is needed to make the cement "set," as it is technically called, the question seems to arise whether it would not be proper to mix the cement first with water, and the sand with coal tar, and immediately afterwards incorporate them in the proper proportions. This would seem to me to be the most proper way, as a certain portion of water is necessary to pass into the solid state with the cement to render it hard; and the coal tar would, I think, secure the whole from the action of the frost. I have no means of trying the experiment, as the coal tar is not to be had in this quarter. What is the price per barrel with you? And how many square feet, in your judgment, will the cement made from a barrel cover with a sufficient thickness to be permanent? C. B. *Princeton, Bureau Co,, Ill., July* 12, 1849.

We learn from Mr. MERRIFIELD, the secretary of the Albany Gas-Light Company, that they have coal tar for sale at $1.25 per bbl. of 30 gallons, *without* the barrel, or $1.75 *with* the barrel. We should be glad to receive an answer to the other inquiries of our correspondent. EDS.

Harvesting Machines.

The *Prairie Farmer* states, that without the use of machinery in gathering the grain in that section, the harvests of the two past years would have gone to some extent ungathered. It adds that the use of those machines will be much increased the present season, and offers the following estimate:—"McCormick's Reaper has been now sold in the West for three seasons extensively, and somewhat before that. The sales amount, say to the following figures: For the year 1847 to 500, the year 1848 to 800 and 1849 to 1,500—equal to 2,800 in all. Other reapers of various patterns have been put in use, say to the number of 100. Of Esterly's Harvester the whole number in use this harvest, may reach 180. Each Reaper will save as claimed, with the horses attached to it, the labor of four and a-half men. Each Harvester, it is claimed, with the horses employed, will save the labor of twenty men. Our 2,900 Reapers will then stand in the place of 13,050 men; and our 180 Harvesters will displace 3,600 in addition, or 16,650 laborers. In this estimate we count the day's work of the Reaper at 12 acres, and of a Harvester at 16 acres, each being run with four horses—the latter attended by four men.

Sheltering Manure.

Manure which is protected from evaporation or washing, is richer or stronger than that which is exposed. The advantage of cellars for manure, is that they keep the manure in its natural condition, unchanged, and therefore secured against waste. The system of feeding stock in "boxes," now considerably practiced in England, is recommended, partly on account of the better quality of manure so produced. The animals are kept thoroughly littered, so that all the urine is absorbed. We do not discover that the system has any advantages over our mode of feeding in barns and depositing the solid and liquid manure, properly mixed with absorbing substances, in cellars or under sheds.

The following analysis, made at the English Agricultural College, shows the difference in box manure and yard manure—or that which had been sheltered and that which had been exposed in a yard, in the ordinary manner:

	Box Manure. Per cent.	Yard Manure Per cent.
Water	71.04	71.00
Nitrogenised matter, capable of yielding ammonia, 100 parts *dried*	2.37	1.07
Salts soluble in water, containing organic and inorganic matter	10.07	4.06
Organic	5.42	1.82
Inorganic	4.28	2.78
Phosphoric acid	0.03	0.26
Alkalies—Potash and soda	2.00	0.08

Vegetable Manures.

Nature, when untramelled by art, rears most luxuriant crops upon her fields, and yet the surface continually increases in fertility, never exhausted, but becoming richer each succeeding year. Let us suppose some few seeds to be borne by the wind from a distance to some naked surface entirely destitute of tree, shrub, or even a blade of grass, but still of a nature fitted to support vegetation, i. e. containing the inorganic constituents of plants. The seeds take root, and struggling, at length send forth their tender leaflets to the light. The process of vegetation then goes on with greater rapidity: the dew of heaven, or the grateful shower supplies it with certain necessary constituents, and its leaves gather the carbonic acid contained in the air. Thus the plant comes to maturity and then withers and dies, but all the elements which it has drawn from the earth are returned to it, and besides, a large amount of carbon, which has been gathered almost wholly from the atmosphere. As the tender plant of a succeeding year springs up, it receives part of its substance from the decaying vegetable matter of a previous growth; a more vigorous vegetation is the result, and still the deposite of the previous year is only in part taken up by the second growth; thus there is an accumulation of carbonaceous matter from year to year. If the vegetation thus springing up, be of such a nature that the plants do not die annually, but flourish for years and even centuries; still there is a continual accumulation of vegetable matter by reason of the annual deposits of leaves and decayed branches; such deposits give the soil a dark rich appearance, and when the land has been cleared and broken up, it yields fine crops for a long time. In many localities, the carbonaceous matter, having accumulated for centuries in the manner described, has become so thoroughly incorporated with the soil, extending sometimes to the depth of several feet, that the fields will continue fertile for many years; such is the condition of the prairies of the west. When the substances mentioned accumulate upon the surface of low swampy grounds, they do not become mixed with the soil, but there is finally presented, a deposite of black, half decomposed vegetable matter; this material has received the names, *vegetable mold*, *muck*, and *peat*.

We learn from the natural changes given, that nature has made ample provisions for the return of the raw material of which plants are made, to the soil; and she does not stop here, but continually increases the fertility of her fields, providing a surplus of vegetable nourishment.

The art of cultivation should so far imitate nature as to supply a sufficient return for the matter taken from the soil by each crop. Not that there should be a return weight for weight, for that would be impossible and wholly unnecessary, but unless the soil has a bountiful supply of fertilizing material, the process of continued cropping will immediately exhaust it. There is no more economical method of preventing this result than the application of vegetable manures, either in the form of refuse straw, hay, &c., of the farm-yard, or that of vegetable mold from the swamp; not that these substances alone will in all cases be sufficient, but they are easily obtained and contain most of the constituents of plants.—*Eaton's Agricultural Chemistry.*

Nutriment in different Crops.

The different kinds of crop usually raised differ materially in the proportions which they contain of the different essential constituents now enumerated, as required for the support of animals, and the practical deductions to be derived from the chemistry of the subject, will at once be apparent from an examination of the following tables. If we suppose an acre of land to yield the following quantities of the usually cultivated crops, namely:—

Of wheat.....	25	bushels,	or	1500 lbs.
Of barley	35	—	or	1800 —
Of oats.....	50	—	or	2100 —
Of peas.....	25	—	or	1600 —
Of beans.....	25	—	or	1600 —
Of Indian corn....	30	—	or	1800 —
Of potatoes.....	12	tons,	or	27,000 —
Of turneps.....	30	—	or	67,000 —
Of wheat straw...	—	—		3000 —
Of meadowhay...	1½	—	or	3400 —
Of clover hay.....	2	—	or	4500 —

The weight of dry starch, sugar, and gum,—of gluten and albumen—of oil or fat, and of saline matter, reaped in each crop, will be represented very nearly by the following numbers:—

	Woody Fibre,	Starch, Sugar, &c.	Gluten & Albumen,	Oil or Fat,	Saline Matter
Wheat,	220	825 lbs.	180	45	30
Barley,	270	1080	210	50	36
Oats,	420	1050	290 ?	100	75
Peas,	130	800	380	35 ?	45
Beans,	160	640	450	40	50
Indian corn,	270	900	180	150	30
Potatoes,	1350	3240	600 ?	90	24
Turneps,	2000	6700	800 ?	335 ?	600
Wheatstraw	1500	900	40	60	15
Medowhay,	1020	1760	240	120	220
Clover hay,	1120	1800	420	200	400

—*English Paper.*

Agricultural Shows.

NEW-YORK STATE SOCIETY.—At Syracuse, 12th, 13th, and 14th of September.

WAYNE COUNTY, N. Y.—At Palmyra, 26th and 27th of September. The same society will hold an exhibition at Rose Valley, the 3d and 4th of October.

ONEIDA COUNTY, N. Y.—At Hampton, 26th and 27th of September.

MARYLAND STATE SOCIETY.—At Baltimore, 10th, 11th, and 12th of October.

SUFFOLK COUNTY, N. Y.—At Greenport, October 2d.

HERKIMER COUNTY, N. Y.—At Herkimer, 27th September.

WOOL DEPOT.—Mr. H. BLANCHARD, of Kinderhook, has erected a large building for a wool depot, at Shoreham landing, on Lake Champlain. So far as we learned, in our late visit to this section, it is the general intention of the wool-growers to send their wool to this depot. We were pleased to notice the improvement which has been made in cleansing and putting up fleeces for market.

HORSE-CHESTNUTS MADE EDIBLE.—The bitter, green oil, is removed by first grating them to a pulp, then adding one-fiftieth (1-50) by weight of carbonate of soda. The mixture is then thoroughly washed and racked, by means of a clear fountain. and a white and agreeable paste subsides, which is manufactured into bread and cakes.

ANTIDOTE TO POISON.—It is said that a desert spoonful of ground mustard, mixed in a tumbler of warm water, and drank immediately, acts as a speedy emetic, and may be used with safety. In the absence of any thing better, a large draught of warm water is one of the best general antidotes for poison, as its immediate tendency is to dilute it and soften its virulence, and induce vomiting.

BLACK ANTS.—Gum Camphor laid in the tracks of ants is said to be excellent for keeping away these troublesome insects.

Domestic Economy, Recipes, &c.

Useful Recipes.

Eds. Cultivator—Will you please to publish the following method of making good bread with flour of grown wheat.

With a large spoon or stick, stir boiling water into the flour; then, to cool it before putting in yeast, mix in more flour and cold water. Work in enough flour to prevent its spreading out flat in the pans.

Cure for Dysentery.—The following recipe may prove of more value to many of your readers than their subscriptions for your paper.

To check a dysentery or summer complaint. Equal parts of sumach leaves or bark, catnip and peppermint; steep in hot water; drink frequently, and use for injections. In these complaints, especially in the dysentery, the bowels become coated with canker, which comes off, together with their lining, often accompanied with blood and mucus, which leaves them so raw and inflamed, that their contents moving through them causes excruciating pain. This decoction will cleanse the bowels, and to assist their healing, take powders or pills of Cayenne pepper, and use a tea of the same. To make the sumach "drink" palatable, put in it the seeds, (which are very acid,) and sweeten it.

Neither *these*, nor *any* medicine will avail in these complaints, if a strict diet is not observed. A person would sooner recover on rice water alone, *without* medicine, than *with* medicine and hearty food.

W. L. F. *Milwaukie, Wis., June* 11, 1849.

Butter—Is improved by working the second time after the lapse of 24 hours, when the salt is dissolved, and the watery particles can be entirely removed.

Raspberry Syrup.—To every quart of fruit add a pound of sugar, and let it stand over night. In the morning, boil and skim it for half an hour; then strain it through a flannel bag, and pour it into bottles, which must be carefully corked and sealed. To each bottle add, if you please, a little brandy, if the weather is so warm as to endanger its keeping.

Raspberry Jam.—Take one pound loaf sugar to every pound of fruit; bruise them together in your preserving-pan with a silver spoon, and let them simmer gently for an hour. When cold put them into glass jars, and lay over them a piece of paper saturated with brandy; then tie them up so as carefully to exclude the air.

Blackberry Syrup.—We are indebted to a friend for the following receipt for making blackberry syrup. This syrup is said to be almost a specific for the summer complaint. In 1832 it was successful in more than one case of cholera.

To two quarts of juice of blackberries, add one pound loaf sugar, ½ oz. nutmegs ½ oz. cinnamon, pulverised, ½ oz. cloves, ¼ oz. alspice, do. Boil all together for a short time, and when cold, add a pint of fourth proof brandy. From a teaspoonfull to a wine glass, according to the age of the patient, till relieved, is to be given.

Currant Jelly—Place the currants in a stone or glass jar, and suspend this jar in a vessel of boiling water until the currants are in a condition to yield their juice readily; then place them, while hot in a bag, and press out the juice; add pure double-refined loaf sugar, and then boil until it jellies: this point is ascertained by dropping a portion on a cold plate, and if it will hold fast with the plate upside down, it is done, and should be removed from the fire. Should any scum arise, it may be skimmed off. Put the jelly, while hot, into jars, and cover tightly. Our experiment last year resulted thus: Twenty-seven quarts of currants gave twenty-nine pints of juice, and with twenty-nine pounds of double-refined sugar, gave eighteen and a half quarts of very superior currant jelly. Those who suppose that currant jelly can be made with common brown sugar, or even with inferior loaf sugar, will find themselves without a market, as an inferior article cannot be sold. —*Selected.*

Small Beer.—For making three gallons of beer, take one quart of molasses, 20 drops oil of spruce, 15 drops oil of winter-green, 10 drops oil of sassafras; add hot water to make the requisite quantity; mix the ingredients well; let the liquor stand till it is blood-warm, then add one pint of yeast; let it remain ten or twelve hours; bottle it, and in three hours it is fit for use.

Answers to Correspondents.

Turneps with Corn.—F. G. R., Shadwell, Va. On rich land very good crops of English turneps are sometimes obtained, by scattering the seed broadcast over the ground at the time of the last hoeing. If the season is dry, the turneps seldom amount to much; but if it is sufficiently wet, they will grow well, after the stalks are topped; or if the stalks are not cut, and the corn is cut up and shocked at the proper time, the turneps, having the ground to themselves through the autumn, will acquire a good size.

Cisterns for Watering Stock.—W. J. P., Lakeville, Ct. There is no objection to watering stock from cisterns, properly made. Make them so deep in the ground that they will not be much affected either by the heat or cold of the atmosphere.

Whitford's Corn-Sheller.—W. E. W., Peoria, Ill. We have no information in regard to this implement, except what is contained in the article to which you allude—Cultivator for 1843, p. 34.

Dairy Salt.—P. W., Herkimer, N. Y. Pure rock salt, ground fine, has generally given satisfaction, for the preservation of butter. The article is prepared in a nice manner by C. N. Bement, of this city, and put up in bags of twenty pounds each.

THE FLOWERS.

BY MRS. E. C. KINNEY

Where'er earth's soil is by the feet
  Of unseen angels trod,
The joyous flowers spring up to greet,
  These visitants of God.

They on celestial errands move
  Earth noiselessly to bless,
Oft stooping down in balmy love,
  The flowerets to caress.

And thus, their breath its fragrance leaves
  Among the woodland blooms,
And breathing sense, through flowers receives
  Angelical perfumes.

The scarlet or the crimson tips
  That flowery petals wear,
May be the vermeil from the lips
  Of angels painted there.

While spirit-whispers safely lie
  Within each chalice hid,
That mutely speak to Sorrow's eye,
  And lift its drooping lid.

And ah, that crystal, glistening clear
  Upon the tinted leaf,
May be an agel's holy tear,
  Dropt there for human grief.

Forever hallowed then, as fair,
  Are all the blessed flowers,
That scent with Heaven's ambrosial air
  These fading earthly bowers.

Through flowers Love finds fit utterance,
  And friendship solace lends:
For he that giveth Flowers perchance
  An angel's message sends.

Notes for the Month.

Communications, have been received since our last, from Agricola, Newton Reed, Viator, T. J. R. Keenan, 8. of N. R., J. H. Salisbury, A. S. Casseman, Wm. J. Pettee, Ambrose Stevens, A Farmer, Cyrus Bryant, L. D., R. H. Phelps, J. D. Patterson.

Books, Pamphlets, &c., have been received since our last as follows:—"Service-Pipes for Water," an investigation made at the suggestion of the Board of Consulting Physicians of Boston, by E. N. Horsford; from the author. "Illustrated Phrenological Almanac," by L. N. Fowler; from the publishers, Fowler & Wells, New-York. "Diseases of Winter"—Consumption, Coughs, Asthma, &c., their remedial and avertive treatment, by R. J. Culverwell, M. D.; from the publisher, J. S. Redfield, New-York.

H. R. R. The apples mentioned by you, never arrived.

Seedling Cherry.—A cherry, raised from seed by Dr. H. Wendell, of this city, has received the name of "Wendell's Mottled Bigarreau." From some specimens which we have received, we think it is a valuable variety. It is nearly as large as the Black Tartarian, and of a rich and excellent flavor.

Samples of Wool.—Mr. J.D. Patterson, of Westfield, Chautauque county, N. Y., has sent us handsome samples of wool from a yearling ram and ewe, imported from France by Mr. Taintor, of Hartford, Ct., in July, 1848. The weight of the fleeces is given as follows: ram 14 lbs. 8 oz.; ewe 10 lbs. 10 oz. The latter raised a lamb. Mr. P. says, "their wool was first well rubbed with soap, and they were then thoroughly washed in a clear stream of running water, and sheared as soon as they were dry."

Albany and Rensselaer Horticultural Society.—We had no opportunity of noticing the exhibitions of this society, held on the 20th of June and the 3d of July, as our June number had previously gone to press. The display on both occasions was highly creditable. At the first exhibitions the show of strawberries was very fine, and that of cherries equally so at the second. The premium for the best variety of strawberries was awarded to B. B. Hirtland, of Greenbush, for *Burr's New Pine*; for the best variety of cherry, (July 3d.) to E. E. Platt, of Albany, for *Black Tartarian*.

The exhibition of the 25th of July, in respect to gooseberries and currants, was superior to any ever held by the society. It was rather late in the season for raspberries and cherries, and the display of flowers, of out-door culture, was much lessened on account of the severe drouth. James Wilson, of Albany, presented forty-one varieties of gooseberries, receiving the premium for the greatest collection; and Henry Vail, of Troy, presented seventeen varieties, receiving the premium for the best collection and finest specimens. The premium for the best raspberry was awarded to H. Vail, for the *Falstolf*; for the best currant, to Jas. Wilson, for *Knight's Sweet*; for the best cherry, to Dr. H. Wendell, for *Wendell's Mottled Bigarreau*. Fine specimens of corn for boiling were offered by Mr. Douw and Mr. Kirtland, of Greenbush; and fine specimens of tomatoes, egg-plants, potatoes, cabbages, &c., by Messrs. Prentice, McIntosh, and others. Flowers were offered by Messrs. Rathbone, Douw, Wilson, Newcomb, Wendell, and others.

The Horse "Tornado."—When returning from our late excursion to Vermont, we called at Mr. E. Long's, Cambridge, N. Y. Mr. L. is extensively known as a breeder of blood horses, having been engaged in the business thirty years, and been the owner of several celebrated horses. He now owns "Tornado," a horse of much distinction on account of his blood and performances on the turf. He was by the famous American Eclipse, out of the noted mare Polly Hopkins. Tornado is now eleven years old. He was put on the course at an early age, and won several races with horses of repute; but was withdrawn in consequence of an injury received in one of his pasterns, while running. He will be recollected by some, as having received the first premium on blood horses at the N. Y. State Fair, at Saratoga. He is a horse of attractive appearance—has a fine head and eye, a beautiful glossy coat and clean limbs. It is thought he will make a good cross with the stock of the neighborhood. We saw none of his progeny, except a sprightly yearling colt, and a very pretty and active filly, two months old; from a thorough bred mare belonging to Mr. Thomas Fowler, of White Creek. Mr. Long showed us a black mare, three-fourths blood, as he informed us—a very handsome animal, and a fine traveller.

Stock for Sale.—Persons wishing to obtain fine stock, are referred to the advertisements, in this number, of Messrs. Bingham, Tilden, and Fairbanks. It will be seen that the gentleman first named, propose to offer cattle and sheep for sale at the State Fair at Syracuse. This occasion will undoubtedly afford an excellent opportunity for the purchase of good stock of all kinds.

Protection for Roses and tender Plants.—During a late call at the residence of J. S. Pettibone, Esq., Manchester, Vt., we were informed of a mode of protecting roses and tender plants from injury by frost, which we think valuable. Before winter sets in, small spruce trees, about four feet high, (which are readily obtained in many situations,) are, after they have been sharpened and the lower limbs taken off, set as *stakes* for the support of the shrubs. The shrubs are fastened round the stakes, and small hemlock, or cedar boughs, are placed round in a conical form, in sufficient quantity, (and but a thin layer is required, as they pack closely and exclude the air), to afford the desired protection. They remain in this situation till warm weather returns, when the boughs and stakes are removed. The spruces keep green all winter, and impart, during that dreary season, an enlivening aspect to the *parterre*.

Cotton Cloth Caps for Haycocks.—These have been tried in the eastern States with great success. They are two yards square, made by sewing two pieces of yard-wide sheeting together, with a stout hem at the ends, about two inches of the corners sewed back, to which strong cord loops are attached. Through each of these loops a sharp stick, a foot and a half long, is thrust into the hay, which secures it to its place. The cost is 30 cents each; that is, four yards, at 7 cents per yard, and two cents for twine and thread. If made during the long winter evenings, the cost of making need not be counted. The rain cannot wet the hay while these caps are on; and damaged hay, and tedious drying after showers, are done away. Now is the time to use them.

The Wheat Crop.—Accounts from the south, are generally favorable for the wheat crop. In the central and southern portions of Ohio, it is injured by rust, which struck in the latter part of June, and also by the wheat midge. From northern Ohio, we have heard no complaint. In Michigan, we learn from Mr. Mallary, of Macomb county, that the crop is promising. He says the crop was sowed late for fear of the insect, [Hessian fly?] and no injury from that source had been experienced. From Illinois and Wisconsin, we hear favorable reports. In our own State, we believe the crop is as good as usual, though injured by the midge to some extent in the Western part of the State.

Postponement of the Ohio State Fair.—We learn that the Ohio Board of Agriculture have concluded not to hold a State Fair this year, on account of the prevalence of the Cholera in Cincinnati and other sections of the State.

Syrian Cattle.—We have seen it stated that Lieut. Lynch, U. S. N., brought to this country on his return from the Dead Sea expedition, a pair of calves, purchased at Damascus. It is said they have been placed in possession of Col. James Castleman, of Clarke county, Va. We have as yet seen no *authentic* account or description of these cattle. Will Col. Castleman, or some person acquainted with the animals, be good enough to give us their history and characteristics.

Fattening Cattle on Hay.—Grass which is cut while it is in blossom, and carefully made, will fatten stock nearly as well in a dry, as in a green state. Some of the best farmers in the western part of Vermont, are particular in making their hay for this purpose. Mr. Bowdish, of Weybridge, whose stock is well known for its good qualities, and fine condition, informed us that he found no difficulty in making his cattle thrive on hay. His oxen and steers are fed liberally on the best of hay through the winter. With careful driving, they perform the farm labor in spring without loss of flesh, and being turned on sweet pastures, at the proper time, they get in high order for early beef for the Boston market, and always command a good price.

Keeping Hens.—Mr. J. M. Mason, of Orwel, Vt., usually winters two hundred hens. His practice is, to buy pullets in the month of November. He buys those which were hatched early, as such are the best to lay in the winter. They cost about twelve and a half cents each. They are fed in a great degree on *mutton*. Mr. M. buys sheep in the fall at low prices—about what their pelts and tallow are worth. The carcasses are boiled, the tallow saved, and the flesh and bones, after being allowed to freeze, are kept till spring,—a suitable portion being fed to the hens. daily. They are allowed, in addition to the meat, a little corn, oats, or buckwheat. They lay well through the winter—comfortable quarters being provided for them—and continue to produce eggs in abundance till June. It is found most profitable to sell the whole stock at this period, as they are generally fat, and will bring from twenty to twenty-five cents a-piece. If kept through the summer, they lay but little in the warm months, the eggs will keep but a short time, the fowls grow poor in moulting, and if kept another year will not lay as well as young ones. Mr. M. keeps hens only, (no cocks,) and is inclined to think he obtains as many eggs, and that they keep better when not impregnated. As to varieties, he has tried several, and thinks the *top-knots* will generally lay rather more eggs the first season; but their carcasses are of less value than most other kinds.

Maple Sugar.—The last spring was a favorable one for the manufacture of maple sugar. Vermont, as usual, produced a large quantity—we have no means of knowing how much, but is an article of great value to the state. We are informed that the process of making has been much improved within a few years. Instead of boiling the sap in cast-iron kettles, it is boiled in shallow pans and cooled in wooden or tin vessels. The sugar is thus freed from the dark color and *irony* taste which it almost always had when made in the old mode. In our late trip to Vermont, we saw some very handsome samples of maple sugar, particularly at Mr. Hines', in Brandon, and Mr. Dean's, in Manchester. Mr. H.'s was a sample of about five hundred pounds, which was of such a quality that it would have sold by the quantity for 12¼ cents per pound. Maple trees yield from two to four pounds of sugar each, in a season, and a good "grove" affords a handsome edition to the income of a farm.

Mowing Pastures.—We have before spoken of the necessity of keeping the grass of pastures from running up to seed and dying on the ground. As grass grows with more rapidity in the early part of the season than at a later period. it is difficult to keep it properly fed down, without putting on more stock than can be kept on the land after the *flush* of feed is over; and yet, if the grass goes to seed and lies on the ground, the after-feed will be less in quantity and of poorer quality. The difficulty may be overcome by mowing the grass at the right time—before it has run to seed, at all events. This may be done on many pastures to good advantage; the hay obtained being of good quality for any kind of stock; and the pastures are left clean, start equally, and afford a good growth of fresh after-feed. We have lately met with several farmers who have followed this practice for many years, and they agree with us in regard to its utility.

Usefulness of Swallows.—While visiting a friend in the country, a few weeks since, we noticed, under the eaves of a barn, near the dwelling, about fifty swallows' nests. The bird was the *Hirundo fulva*, or Cliff-swallow, of ornithologists. In most of the nests there were young, and the old birds were very assiduous in providing them with food. We observed them at different times in the day, and not a minute elapsed in which one or more birds did not return to the nests with something for the young. Their food consisted of winged insects taken in the air; and the numbers which were thus destroyed by this colony of swallows, must have amounted to thousands, each day. We were informed that no flies, or very few, were to be seen around the house or barn—the family and the domestic animals of the farm, being thus freed from a disagreeable annoyance.

Large Corn Crop.—The *Ohio Cultivator* states that John Longhry of Adams Co. raised 1500 bushels of shelled corn on eleven acres, or 136⅓ bushels per acre for the whole field.

Prices of Agricultural Products.

New-York, July 24, 1849.

FLOUR—Genesee, per bbl., $5.06a$5.18¾—Western, $4 75a $4.81—Fancy brands, $5.50a$5.62½.
GRAIN—Wheat, per bush., $1.16a$1.25—Corn, 56a60c.—Rye, 57½c Oats, 34a35c.
BUTTER—best, per lb., 18a20c.—western dairy, 12½a14c
CHEESE—per lb., 5a6c.
BEEF—Mess, per bbl., $13a$13.50
PORK—Mess, per bbl., $11—Prime, $9a9.12½
LARD—per lb., 6¾a7¼c.
HAMS—Smoked, per lb., (best) 12½a14c.—Western 7c
HOPS—per lb., first sort, 6a8c.
COTTON—Upland and Florida, per lb., 9¾a10c.—New Orleans and Alabama, 7¼a9¾c.
WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	36a38c.
" half blood do.,	31a33c.
" one-fourth blood and common,	29a30c.

Remarks.—There is a general buoyancy in the market Cotton brisk and in demand. Flour and meal in good demand for the east. Provisions are firm. and prices for meats generally upward. There is a fair business in wool,—prices tending upward.

To Nurserymen, Gardeners and Horticulturists.

HAVING completed my arrangements with nurserymen in England. France and Belgium, I am prepared to import from any of the above places, any thing required in the business, on the most favorable terms, and special attention given to the forwarding without delay, all goods imported by me or consigned to my care by others.

I will also give personal attention to the purchase or sale of any thing in this market. or neighboring nurseries, for distant nurserymen. Being advised of the various stock in the different nurseries, I can always do this to advantage.

FOR SALE—Russia Mats, Osage Orange Seed, Plum and Cherry pits, Propagating glasses of all sizes, Flower pots, &c., at

GEO G. SHEPPARD'S
Horticultural Agency, 145 Maiden Lane, New-York
August 1.—1t

Syracuse Nurseries.

Thorp, Smith & Hanchett, Proprietors, Syracuse, N. Y.

FIFTY acres of the fertile soil of Onondaga Co. are occupied by the proprietors of these nurseries in the cultivation of *fruit trees* alone, embracing almost every desirable variety of Apple, Pears, Peach, Plum, Cherry, Apricot and Nectarine. Trees sent from their nurseries are universally admired for their vigorous, healthy, and *youthful* growth,—the best guarantee to the purchaser of a rapid advance to largeness of size, and beauty of form,—and it is the aim of the proprietors to be able to supply those who may favor them with their orders with a quality of trees always superior.

Among their varieties of the apple, they have many thousands of the justly celebrated NORTHERN SPY, *from seven to nine feet in height*, which they will continue to supply, as heretofore, in an assortment with others, at the *same rate*. Where the selection is left to them, a portion of the Northern Spy is always included. They cultivate largely, also, the *Hawley*, the *Green Sweeting*, the *Ladies' Sweeting*, *Peck's Pleasant*, *Swaar*, *Baldwin*, *Spitzenburg*, in short, all of the best standard varieties, early and late. Among forty of the choicest kinds of pears, they have large sized and well formed trees of the *Onondaga*, *Oswego Beurre*, and *Van Mon's Leon Le Clerc*. Of cherries, peaches, plums, &c., their nurseries include, in large numbers, all that are most desirable. Purposely limiting their varieties of fruit trees to those only that are of approved worth, their Catalogue will be found to contain scarcely one that ranks below "*first rate*" Persons desiring to buy at *wholesale*, can be supplied on the most liberal terms, and can depend upon obtaining selections of the best varieties, as well as trees of the finest growth.

The proprietors have been much gratified by the constantly increasing demand for their trees, from the Eastern part of this state, and from New England; and in soliciting a continuance of favors from those quarters, they pledge themselves that the productions of their nurseries shall not forfeit the partiality which is so flatteringly bestowed upon them.

Much care is given to the packing of trees, so that they can be transported with safety to any distance.

Catalogues may be obtained at the apothecary store of M. W. Hanchett, between the Railroad and Syracuse House; and by *post-paid* application to the proprietors.

August 1.—3t.

Sale of Hereford Cattle.

THE Messrs. BINGHAM, of Vermont—brothers—propose to sell at public auction, on the Show Ground of the New-York State Fair at Syracuse, from ten to twenty head of Hereford Cattle, 3 years old and under—bulls and heifers. Our cattle—Herefords—to found our herd, were purchased of Messrs. Corning and Sotham, about three years ago. We have been disposed to give these cattle a fair trial, to see what their merits would prove to be, before offering them to the public. We have come to the conclusion that no race of cattle can compete with them when all their good qualities are taken into consideration. We are resolved to push ahead in the cultivation of the Herefords, as being a race, affording the best profits for keep and care, and proving themselves first class cattle for all the purposes of the breeder. They make a noble cross with the Durhams or their grades, as well as with the native stock, showing a great and decided improvement. We offer these cattle to the public with the strong conviction that they will prove a desirable acquisition to any herd.

PURE BRED MERINO SHEEP.

We shall also offer at private sale, a large lot of pure bred Merino Sheep, from imported sires. The breeders of sheep will do well to look over our flocks, before purchasing elsewhere. We sell no mongrels, or grades, or worthless sheep for great prices;—but we mean to deal fairly with those who purchase of us, and sell them our best blooded sheep, at fair remunerating prices—so that they shall prove a decided improvement to the flocks with which they may be placed.

August 1.—1t.

Hereford Bull.

FOR sale by the subscriber, a full blood Hereford Bull, from the herd of Messrs. Corning & Sotham, Albany, N. Y. Said bull is six years old, and for symmetry of form, size, and the thrift and excellence of his stock, is probably unsurpassed by any bull in the State. J. P. FAIRBANKS.

St. Johnsbury, Vt., Aug. 1.—3t.

Saxon Sheep.

THE subscribers having disposed of their pasture lands, now offer their entire flock for sale. They will also offer about 70 Bucks and Buck Lambs at auction, at Syracuse, on Wednesday or Thursday, the 12th or 13th of September next, on the grounds of the State Fair. Of time, due notice will be given.

New Lebanon, N. Y., July 13, 1849. TILDEN & CO.

We refer to.

H. Blanchard & Co., Kinderhook Wool Depot.
Samuel Lawrence, Esq., Lowell
Sanford Howard, Esq., Albany.

August 1.—2t.

A Small Farm Wanted.

A Letter addressed to C. S., Newport, N. Y., will receive attention.

August 1.—2t.

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE first number of the fourth volume of this work, was issued on the 1st of this month (July,) and the future numbers will be issued regularly on the first of each successive month. It is devoted,

1. *To* GARDENING, *in a thoroughly practical as well as scientific sense.*

2. *To the* DESCRIPTION *and* CULTIVATION *of Fruit Trees.*

3. *To Gardening as an* ART OF TASTE, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*

4. *To* RURAL ARCHITECTURE, *including designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Ice Houses, Vineries, &c., &c.*

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture, and the tasteful in Rural Life; subjects now so largely occupying all those interested in country pursuits.

All readers who have the least interest in rural affairs, should take a work which is exerting such a manifest influence upon the taste of the country. Its valuable correspondence furnishes from time to time the fruits of the experience of our most intelligent cultivators, and it is scarcely necessary to repeat, that Mr. DOWNING's labors in the department of Rural Architecture and embellishment give him substantial claims to public respect Their effects are already seen in every part of the country, in improved cottages, gardens, green-houses, pleasure-grounds, fencing, &c. The present number opens with some capital suggestions concerning the improvement of Country Villages.—*Newark Daily Advertiser.*

TERMS—Three Dollars per vol. or year. Two copies for $5—in advance.

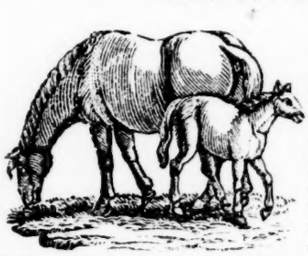
☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!



THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown tobe of a dangerous tendency These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural functions, without diminishing or destroying their power, hence are safe in the hands of every one

G. H. DADD, M. D

A LIST OF HORSE AND CATTLE MEDICINES.

Physic balls, 75c. per box.
Alterative ball, 75 c. do.
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot.
Healing balsam for wounds and saddle-galls, 75c. per bottle
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
Lorse Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by STIMPSON & REED, 26 Merchant's Row; also at DADD'S HORSE AND CATTLE MEDICINE DEPOT, Nos. 1 and 2 Hay market Square, Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines. June 1.—3t

The Farmer's Encyclopædia,

IN one volume, royal octavo, 1165 pages, beautifully bound; containing 17 fine plates, and numerous wood cuts. Edited by GOUVERNEUR EMERSON. A standard work of reference upon all subjects connected with farming and country life.

"Of all the Agricultural works that have been lately published, this appears the most likely to be of real service to the practical farmer."—*Central New-York Farmer.*

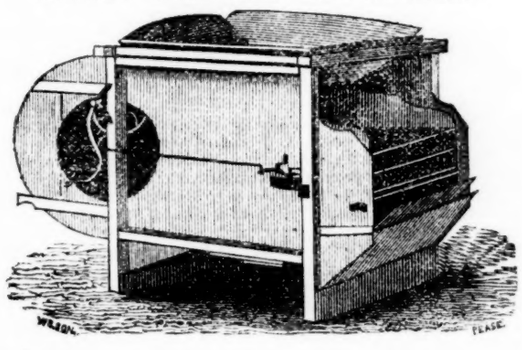
"It is a mine of wealth—no farmer should be without this truly valuable book."—*Burlington Gazette.*

Sold by Carey & Hart, *Philadelphia;* C. M. Saxton and John Wiley, *New-York;* Luther Tucker, and W. C. Little, *Albany;* Derby & Co., *Buffalo;* W. D. Ticknor & Co., and B. B. Mussey, *Boston;* W. H. Derby & Co., and Ely & Campbell, *Cincinnati;* Whiting & Huntingdon, *Columbus;* Norton & Beckwith, *Louisville, Ky;* J. B. Steel, and Woodbridge & Co., *New Orleans;* M. Boullemet, *Mobile;* W. D. Skillman, *St. Louis;* N. Hickman, *Baltimore;* A. Morris, *Richmond, Va.;* H. D. Turner, *Raleigh, N. C.;* F. Taylor, *Washington, D. C.*

July 1, 1849.—1t.

I. T. Grant & Co.'s

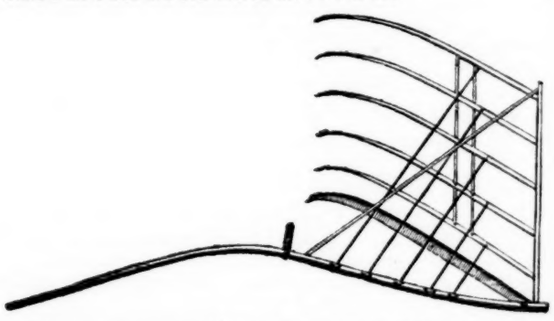
PATENT FAN MILLS AND CRADLES.



WE continue to manufacture these celebrated Mills and Cradles. They have been awarded six first premiums at the New York State Fairs, and at the great American Institute in New York, and several County Fairs, always taking the first premium over all other mills. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the year 1847 they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society, for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains the same as before.

Our fans are extensively used and highly approved at the south, for cleaning rice. We are permitted to make the following extracts from letters received from Hon J R Poinsett, of South Carolina:—"The fan you sent last summer, [1848] has been successfully used to clean dirty rice, and winnow that from the threshing floor. It answers every purpose." In relation to another of our fans, he writes, (April 23, '49.)—"Both this and the first mill you sent, work very well; and the last, which is the largest that can be well worked by a man, cleans the dirty rice perfectly, and is altogether the best wind-fan I ever used for that purpose."

Our Cradles have taken the first premiums at two New York State Fairs, and are considered the best in use.



The great encouragement we have received from dealers and agriculturists, has induced us to greatly enlarge our business, and we hope by strict attention, to merit a further patronage.

Orders will be thankfully received, and receive prompt attention.

I. T. GRANT & CO.

Junction P. O., Rens. Co., 8 miles north of Troy.

May 1, 1849.—3t. eom.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

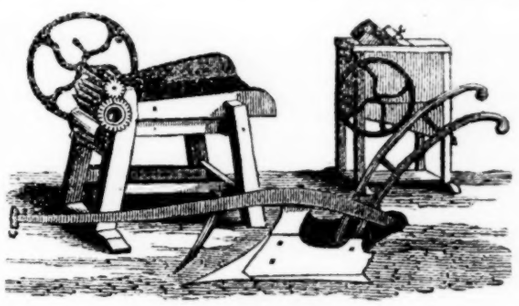
37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan.,1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.



John Mayher & Co.

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co's celebrated and unequalled First Premium Eagle D. Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

Contents of this Number.

ILLUSTRATIONS.

NOW IN THE PRESS,

TO BE PUBLISHED ON THE FIRST OF AUGUST,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

A Greatly enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

ALL THE VALUABLE INFORMATION

Known at the present time, relative to

FRUITS AND FRUIT CULTURE.

It will contain

THREE HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work; and further to enable the reader to know at a glance, the various grades of excellence, the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole will form a handsome duodecimo volume, at the low price of One Dollar.

Peruvian Guano.

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